Examining U.S. Army Logistics: Determining Relevance for 21st Century Operations

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Abstract

This paper will review some of the historical trends and discuss the implications for the future of Army logistics as it supports the nation's Army, forward deployed or as it projects ground power to operations in a combatant commander's area of operations. This analysis will be accomplished through a review of the logistics force structure of the Total Force, by looking at case studies of some pertinent logistics structure challenges, influences, and corresponding initiatives during the timeframes of WWII, Vietnam, Desert Shield/Storm, and Operation Iraqi Freedom/Operation New Dawn, and by discussing the current era of persistent conflict. Each of these case studies examines the timeframe's logistics structure, logistics flow, use of reserves, and use of contractors.

Providing logistical sustainment to an active duty U.S. Army is an expensive task. As the nation currently looks at efficiency in operations and cost reductions across the whole of government, changes in the Army logistics will necessarily occur. This paper will look at the historical evolution of Army logistics, primarily in the modern era since 1940, and make recommendations for a feasible, efficient logistical structure for the near future.

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Introduction

The U.S. Army is a Total Force that is comprised of the Regular Army and the Reserve Component. [1] The Reserve Component consists of the U.S. Army National Guard and the U.S. Army Reserve. Today's Army of 2012 has been transformed from the division based Army of Excellence[2] (also referred to today as the Legacy Army) to the Modular Force.[3] The Modular Force focuses on the brigade combat team as the army structural building block to project ground power. The Regular Army Logistics structure at the echelon above brigade and its corresponding capability have been gradually reduced over the last forty years. Some of the former logistics structure has been inactivated and some of it has migrated from the Regular Army into the Reserve Component.[4] This paper will review some of the reasons that have led to this trend and discuss the implications for the future of Army logistics as it supports the nation's Army, forward deployed or as it projects ground power to operations in a combatant commander's area of operations. This analysis will be accomplished through a review of the logistics force structure of the Total Force, by looking at case studies of some pertinent logistics structure challenges, influences, and corresponding initiatives during the timeframes of WWII, Vietnam, Desert Shield/Storm, and Operation Iraqi Freedom/Operation New Dawn, and by discussing the current era of persistent conflict.

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[1] The U.S. Army's Total Force Policy is an initiative to train, equip, and employ the Reserve Component so that it can serve in an operational role, in defense of the nation when called upon, serving as an integrated and equal partner with the Regular Army. "The Army's Total Force Policy is an ongoing effort by the service to transition its reserve component forces, both the Army Reserve and the National Guard, into an operational force. The intent is to create a seamless and holistic 'total force' governed by the same interchangeable policies and procedures."Army Total Force Policy, STAND-TO! July 27, 2010, http://www.army.mil/standto/archive/2010/07/27/ (accessed March 13, 2012).

[2] John Romjue, "The Army of Excellence, the Development of the 1980s Army" (TRADOC Historical Monograph Series, U.S. Army Training and Doctrine Command, Fort Monroe, VA, 1993), 13.

[3] *Army Modular Force, STAND-TO!* November 14, 2005, http://www.army.mil/standto/archive (accessed March 13, 2012).

[4] Jack Stulz, *United States Army Reserve 2020: An Operational Force Providing Strategic Depth in an Era of Persistent Conflict*, http://www.usar.army.mil/ (accessed March 15, 2012).

A common thread that runs throughout history is the challenge governments have encountered trying to balance between a highly effective, usually fulltime professional army that is costly versus that of a part-time or semi-professional army that is fiscally efficient. Military effectiveness is the ability of the soldiers that make up a force to complete objectives assigned to them by the national leadership. Standing armies have been around for several hundreds of years in the western world, but standing logistics or supply units have not always been required. These earlier armies at times lived off the land through which they passed and, in some cases, would depend on contractors to help facilitate materiel. As historian Martin Van Creveld emphasizes, these earlier armies did not require an excessive supply of specialized war materiel with the largest challenge being that of fodder for horses and mules and foodstuffs for the men. "The relative ease with which it was possible to feed an army on the move also explains why it was unnecessary to establish a regular supply corps."[5] The leaders of the time found no compelling reason to maintain and pay the additional expense for a fulltime supply organization, when contractors could be engaged as required for campaigning.[6]

Due to similar reasoning of efficiencies related to cost and the lack of required technical materiel, the U.S. Army's Quartermaster Corps, established in June 1775, was disbanded several times after the Revolutionary War. The Quartermaster Corps was reestablished in early 1812, in response to the second war with England.[7] From 1812 until the beginning of World War II, the Quartermaster Corps conducted supply, transportation, and construction. With the advent of World War II, increased technical specialization forced a reorganization, adding the Transportation Service as a separate Corps from that of

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[5] Martin Van Creveld, *Supplying War: Logistics from Wallenstein to Patton* (Cambridge, UK: Cambridge University Press, 1977), 33.

[6] The first military supply corps was established by the Austrians in 1783. This supply corps conducted foraging parties along the march and brought back to the army whatever could be acquired. This was an improvement upon the prior practice of soldiers being detailed daily under the command of an officer to forage for each small unit's sustenance. The Austrians established this system in reaction to their soldiers' inclination to desert when they were sent on foraging details.

[7] Erna Risch, *The Quartermaster Corps: Organization, Supply, and Service* (Washington, DC: Center of Military History, United States Army, 1995), 1.

the Quartermaster Corps. The Army logistical forces and the creation of the Army Service Forces will be discussed in the body of this paper as part of the World War II initiatives.

Since the creation of the U.S. Army on June 14, 1775, the U.S. Army and the support forces that have sustained the Army have evolved considerably over the two hundred and thirty-six years. In response to current requirements, the U.S. Army is evolving today to better employ forces in support of the nation. The Army Strategic Planning Guidance (ASPG) released in March 2011, states in response to the " …current stress on the force and the anticipated challenges in this era of persistent conflict," [8] that the Army is going to "achieve balance" and "restore depth and breadth" to capabilities in the future. To meet this requirement for balance, the Army is institutionalizing the Army Force Generation Model (ARFORGEN) as the Army's means to provide balance and predictability to soldiers and their families. At the same time, ARFORGEN will provide capably trained and equipped forces to Combatant Commanders. [9]

The Army Strategic Planning Guidance also acknowledges the fact of today's fiscally constrained environment and the resulting effect on the Army by this period of constrained resources. The intent is for the Army to provide a trained and ready force that is versatile and capable of full-spectrum operations. To accomplish this, the Army must balance the utilization of the Total Force. As discovered in the past, to rely on a force that is all Regular Army serving on active duty may provide for an extremely effective force; however, an all-active duty force providing the nation's defense is certainly not cost efficient. The fiscal constraints that influence the Army now require the continued use of the Reserve Component as an operational force.[10] As a pragmatic means of balancing risk and reducing costs, the Army is relying on the

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[8] Strategic Plans and Policy Directorate, Army G3/5/7, "2011 Army Strategic Planning Guidance," Washington DC, March 25, 2011, 1.

[9] Army Posture Statement 2010, *Army Force Generating Model (ARFORGEN)* https://secureweb2.hqda.pentagon.mil/vdas_armyposturestatement/2010/addenda/Addendum_F-Army%20Force%20Generation (accessed February 11, 2012).

[10] Strategic Plans and Policy Directorate, Army G3/5/7, "2011 Army Strategic Planning Guidance," Washington, DC, March 25, 2011, 12.

Reserve Component and on contracted civilian capabilities for a significant portion of the echelon above brigade logistics capability. [11] A consequence, however, is that the U.S. Army may not have the same capability as readily available to support the Combatant Commander when required. The lead time for mobilizing Reserve Components and/or turning civilian support contracts can be more lengthy than employing a Regular Army logistics capability. [12]

Providing logistical sustainment to an active duty U.S. Army is an expensive task. As the nation currently looks at efficiency in operations and cost reductions across the whole of government, changes in the Army logistics will necessarily occur. This paper will look at the historical evolution of Army logistics, primarily in the modern era since 1940, and make recommendations for a feasible, efficient logistical structure for the near future.

[11] As of 2012, approximately 25% of the Echelon Above Brigade (EAB) logistical units are in the Regular Army. The Total Army of 2012 has four (4) functional Petroleum Quartermaster Groups. The 49th Petroleum Group is the only one (1) serving in the Regular Army and will be deactivated at the end of 2012. The implications are two-fold: The remaining Petroleum capability to provide the bulk petroleum in support of a Combatant Commander will be available only in the U.S. Army Reserve. Career development opportunities for Quartermaster Petroleum Officers and Non-commissions Officers will remain in the U.S. Army Reserve but be unavailable to Regular Army Quartermasters as currently structured. Conceivably, some LOGCAP contracts could begin work more quickly than Regular Army units, which would require strategic lift if the contractor could procure locally available equipment.

[12] Scope and Repudiation: There are many issues that could be addressed and included in this paper that may add additional clarity for some readers. Due to the space limits of this monograph, the author was unable to explore all these items in this paper. Discussions of tactical logistics and logistics structure that may soon be released as part of the Army Vision 2020 are worthy of study, but are not included in this discussion. Additionally, although not discussed here, a study of the of the Modular Logistics structure and opportunities to mix and match logistics organizations to surge in support of forces outside of their assigned organic brigade combat team to support other units or operations may warrant study if deployments or the training tempo warrant additional short term logistics augmentation and echelon above brigade units are not readily available.

Historical Section Case Studies

World War II European Theater: Case Study 1

1) Background

The following section of this paper will illustrate some historical examples of how the Army logistics structure has been established and how it has functioned since the rapid mobilization for WWII. The Army logistics structure is constantly evolving due to improvements in doctrine, training, technology, and/or fiscal constraints. To serve in defense of the nation the Army has undergone considerable changes. Likewise, the Army logistics structure has continued to evolve due to improvements in doctrine, training, technology, and/or fiscal constraints. The Army of WWII relied on conscription, was segregated, and relied upon the mobilization of the Army National Guard and the Army Reserve units that existed at the time. Also, the army of WWII created active (regular) National Guard and Reserve units to fight in the European and Pacific Theaters of Operation as part of an all out mobilization of the nation in support of the war effort.[13]

The European Theater of War is the example used in this paper as it represents one theater of a nation fully mobilized for war. The nation had clearly defined the Germans and their allies as the enemy and demanded their unconditional surrender. For the U.S. Army, it was a major combat operation.[14] Soldiers attacked the European continent via amphibious and airborne assaults. Major combat operations continued for many months in which both offensive and defensive fighting occurred. These operations required an expeditionary army to be mobilized, equipped, trained, moved to the European Theater, and employed. National security priorities and the Army doctrines that supported these priorities changed with

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[13] Erna Risch, *The Quartermaster Corps: Organization, Supply, and Service* (Washington, DC: Center of Military History, United States Army, 1995), 8.

[14] Major Operation: A series of tactical actions (battles, engagements, strikes) conducted by combat forces of a single or several Services, coordinated in time and place, to achieve strategic or operational objectives in an operational area, (Joint Publication 3-0): Department of Defense, "Department of Defense Dictionary of Military and Associated Terms," February 15, 2012, http://www.dtic.mil/doctrine/new_pubs/jp1_02.pdf (accessed March 13, 2012).

world politics and evolving technologies. The Army of 1940 relied upon the logistics structure (technical services) assigned to the Field Armies of the Theater.[15]

The European Theater of World War II was basically a land war begun by Germany in the late 1930's as it invaded several European countries. Logistics were a major issue in this war as a large U.S. Army had to be supplied by sea for nearly all of its needs. The Army of 1940 was little more than 200,000 but grew when France surrendered to Germany in June, 1940, with Congress authorizing the expansion of the Regular Army, the National Guard being federalized, and the "…Selective Service Act providing for an Army of 1,400,000 men."[16] The Army by 1944 had increased to over 8 million men. This larger number required an intensive logistics effort for sustainment, as the Army deployed and fought in the European and Pacific Theaters.

2) Logistics structure

The European Theater of World War II illustrates a baseline support structure of a modern mechanized army that was raised, equipped, trained, and fielded by a modern industrial nation. There are several obvious challenges when comparing World War II Army logistics structure with that of the Cold War and with the logistics structure of today's force in 2012. One challenge in making these comparisons is that the Army structure was in some ways similar but in other ways radically different; the structure evolved over the years.

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[15] For additional information on the Technical Services, the U.S. Army Center for Military History has published an extensive study of Logistics in World War II and a series of books on the history of the Technical Services: Publication 10-9, *The Ordnance Department: Planning Munitions for War*; Publication 10-10, *The Ordnance Department: Procurement and Supply*; Publication 10-11, *The Ordnance Department: On Beachhead and Battlefront*; Publication 10-12, *The Quartermaster Corps*: *Organization, Supply, and Services*, *Volume I*; Publication 10-13, The Quartermaster Corps: Organization, Supply, and Services, V*olume II*; Publication 10-14, *The Quartermaster Corps: Operations in the War Against Japan*; Publication 10-15, *The Quartermaster Corps: Operations in the War Against Germany*; Publication 10-19, *The Transportation Corps: Responsibilities, Organization, and Operations*; Publication 10-20, *The Transportation Corps: Movements, Training and Operations*; Publication 10-21, *The Transportation Corps: Operations Overseas.* All are available for sale at the Government Printing Office and online at http://www.history.army.mil/ (accessed March 13, 2012)..

[16] Erna Risch, *The Quartermaster Corps: Organization, Supply, and Service* (Washington, DC: Center of Military History, United States Army, 1995), 8.

The European Theater of Operations (ETO) had several army-level commands assigned to it, each with its own corps with a corresponding number of down-trace divisions. As the Field Army during WWII was the basic self-contained ground combat structure, the Army Service Forces (ASF) provided support directly from the army level to the regiments of the division. [17] According to the Army Service Regulations (1940), "In general, fundamentals governing the organization and operation of tactical units are applicable to the organization and operation of administrative units. Simplicity, mobility, flexibility, and security are emphasized. Simplicity is exemplified by the direct communication on technical matters of special staff officers of various headquarters, and by eliminating an echelon, such as the corps, from the chain of supply." [18]

As such, Supreme Headquarters Allied Expeditionary Force (SHAEF) was in overall charge of the ETO and responsible for logistical arrangements in support of combat operations delegated to the United States Army European Theater (USAETO). In 1942, USAETO had for supply and services functions a subordinate organization called initially the Services of Supply (SOS).[19] SOS was renamed the Army Service Forces in 1943. The European Theater of War Army Service Forces were led by Lieutenant General John C. H. Lee.[20] General Eisenhower utilized Lieutenant General Lee as his Deputy Commander of the USAETO and established the Army Service Forces, Europe, commanding the Communications Zone (COMZ) which was headquartered first in England in 1942 and then moved forward to France after

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[17] The World War II era Army titled many functions of the Field Army that were not actual combat operations as Administration. The term Army, as used here, refers to the field level army that served subordinate to an army group in World War II. This army controlled subordinate corps. The army was the basic building block on which the U.S. Army deployed a self-contained and self-supporting ground force.

[18] War Department, *Field Service Regulations, Administration, FM 100-10*, (Washington, DC: U.S. Government Printing Office, 1940), 18: The World War II era logistics functions and responsibilities that were in support of a Field Army were outlined in the *Field Manuel 100-10, Field Service Regulation, Administration*, published in 1940. "The army is the largest administrative unit in the combat zone. Its commander is responsible for organization and operation of administrative arrangements to serve components of his command. He is responsible also for defense of the army service area." 47.

[19] Minus administrative functions that were retained at the theater headquarters until after the invasion of Normandy.

[20] Lieutenant General Lee had a close pre-war relationship with General Brehon Somervell, Commander of the Army Service Forces, who was a constant supporter and mentor of Lieutenant General Lee and the European Army Service Forces that Lee led. The relationship between Somervell and Lee went back to their shared service in the 89th Division in World War I, where Lee earned both the Distinguished Service Medal and a Silver Star.

the D-Day invasion of Normandy in June 1944. In August 1944, it was renamed the Theater Service Forces, European Theater (TSFET). The creation of the COMZ delineated a shift from operating "…essentially a zone of the interior in the United Kingdom to providing logistical support for combat operations in the continent."[21] Due to communication challenges, further reorganization took place that resulted in the subdivision of the COMZ into an Advanced Section and Forward Section. This subdivision took place to facilitate command and control as the responsibility for overall logistics planning and execution, along with the administration functions of the COMZ, were unwieldy and required designated staffs. [22]

3) Logistics flow

The United Kingdom served the U.S. European forces as the theater staging base. It allowed the preparation of the theater to proceed in safety outside the combat zone. Just as important as providing a safe sanctuary from attack, the United Kingdom also had both a sufficient number of ports to offload materiel and the required road networks to support a military buildup as staging base for large scale operations on the European continent. The flow of supplies and goods to the European Theater of Operations was an extraordinary effort that led to large stockades of supplies in depots and warehouses.

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[21] Roland G. Ruppenthal, *The European Theater of Operations, Logistical Support of the Armies, May 1941-1 September 1944* (Washington, DC: Center of Military History, United States Army, 1995), 206.

[22] In February 1942, Executive Order Number 9082, *Reorganizing the Army and the War Department,* divided the Army into three organizations to reduce the multiple number of organizations reporting directly to the Army Chief of Staff. These three organizations were the Army Ground Forces, the Army Air Forces, and the Army Services of Supply (SOS), These three commands of the zone of interior were also replicated in the theaters of operation. The SOS, a year later was renamed the Army Service Forces as supply was not descriptive of the overall responsibility of the organization. The seven Technical Services: the Corps of Engineers, Signal Corps, Ordnance Department, Quartermaster Corps, Chemical Corps, Medical Corps and the Transportation Corps became part of the Army Service Forces upon its creation in March of 1942: Robert W. Coakley and Richard M. Leighton, *The War Department, Global Logistics and Strategy, 1940-1943*, (Washington, DC: Center of Military History, United States Army, 1989), 223: Greater understanding can be found by reading; Presidential Executive Order Number 9082 of 1942, *Reorganizing the Army and the War Department* is available at: The American Presidency Project, Robert W. Coakley and Richard M. Leighton: by its sheer size and effectiveness, the ASF dominated the Army G4 with between twelve and forty-five officers assigned. "General Somervell continued to function as the principal advisor to the Chief of Staff on supply matters after he ceased to be the G4 and became Commanding General, Army Service Forces," 100.

These stocks were initially slow to build up in 1943 as total shipping tonnage available to move materiel from the U.S. was the constant constraint; but by May of 1943, "…the modest trickle of troops and materiel into the United Kingdom swelled rapidly to a steady stream."[23] Once the Navy neutralized the German submarine threat to shipping and U.S. shipping capacity increased with the production of the "Liberty" ships, the materiel flowed into the United Kingdom.[24]

To support the American concept of using massed force as a strategy of annihilation, the COMZ required great quantities of war materiel to be produced, stored, moved, and expended in support of the U.S. operations by the Army and its sister services. Supply Depots located in the U.S. industrial-base and the theater rear area, and even near the front line of troops, became "iron mountains of supplies" so that the war fighter was never unable to execute an action due to a shortfall in logistics. In other words, combat operations were logistically sustainable. [25]

Materiel flowed from the U.S. via the sea to the depots established in the United Kingdom. Once a foothold was established in France, this materiel continued to forward via a system of supply depots. The ASF troops pushed supplies via trucks all the way into the division area. Once in the division area, the division's Quartermaster Supply Battalion maintained its own level of stocks and pushed supplies to the regiments' organic supply and maintenance units. The World War II logistics system that the Army Service Force established and operated was a large supply base and supply depot system. It strived to be that of a flowing pipeline, running from factory to the front. What actually developed was stockpiles at

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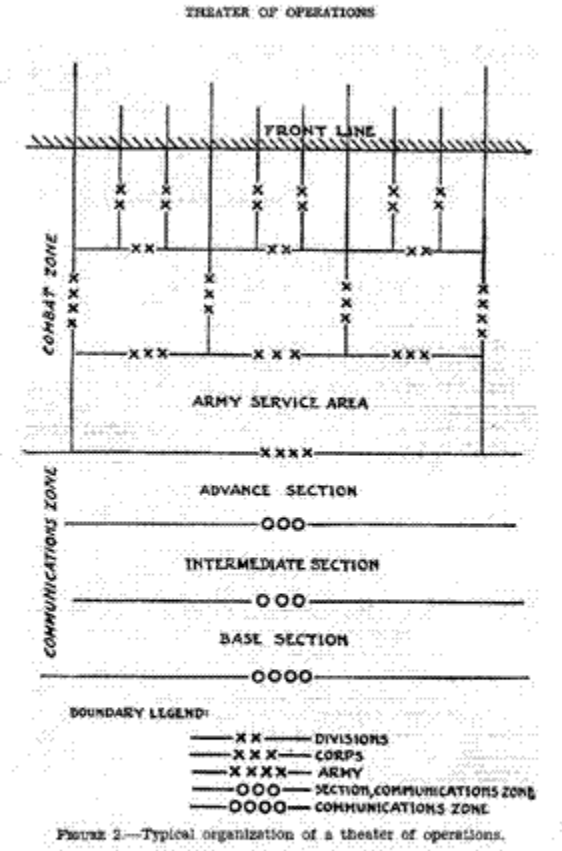
[23] Alan Gropman, *The Big L, American Logistics in World War II* (Washington, DC: National Defense University Press, 1997), 362.

[24] Wayne M. Dzwonchyk, *A Brief History of the U.S. Army in World War II, The U.S. Army Campaign of World War II* (Washington D.C.: U.S. Army Center of Military History, 2003), 17: "The defeat of the German U-boat threat, critical to the successful transport of men and materiel across the Atlantic, had been largely accomplished by the second half of 1943."

[25] Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (Bloomington, Indiana University Press, 1973), XIII.

each level of supply that called back for replenishment when stocks were depleted. However, as historian Geoffrey Perret stated, "In the ultimate, victory through excess was cheaper than defeat without waste."[26]



Source: War Department, Field Service Regulations Administration, FM 100-10 (Washington, DC: U.S. Government Printing Office, 1940), 8.

Figure 1: Theater of Operations

The above sketch of the organization of the theater of operations of 1940 illustrates the size and structure of the Army that had been built and trained in the United States and employed in the ETO. The COMZ was made up of the Base, Intermediate, and Advance sections where the preponderance of the Army Service Forces received, processed, and pushed forward materiel to the soldiers in the combat zone

[26] Geoffrey Perret, *There's a War to be Won, The United States Army in World War II* (New York, Random House, 1991), 302.

from the Army Service Area to the division. The divisional units had their own assigned support structure that pushed forward from the division rear area to the regimental area.

The invasion of the Allied force from the United Kingdom to the French shore at Normandy was intricately planned. Logistics planners built detailed synchronization schedules of all materiel and commodities to be moved to their assigned locations and with tightly managed timings between serials. This detailed plan was of concern for some, as the leaders realized there had been very little flexibility built into the plan to account for weather delays, losses to the enemy, or other factors.[27] This planned system did not materialize and, in fact, fell apart even before reaching the beaches. As is frequently the case in war, the soldiers adapted and improvised a system that worked on the ground, according to the individual circumstances. Just clearing the Normandy beachheads was an all-out effort of adapting to the conditions. The invasion force arrived during unexpectedly rough weather conditions in the English Channel. The intricately planned flow of materiel did not happen as the timeline suggested nor did the materiel required for forces as they moved off the beaches flow as planned. According to the U.S. Army Center of Military History, "The success of [*Overlord*] logistics was due to the ingenuity and dedication of the logistics personnel on the scene who did a remarkable job in adapting to battlefield circumstances in moving supplies ashore and supporting the combat forces."[28] The famed "Red Ball Express" provides one such example of improvisation.

In September 1944, after the U.S. Army had broken out from the beaches and pursued the enemy east toward Germany, General George Patton and his Third Army had reached an objective the Allied planners assumed would not be reached until May of 1945. The pursuit, however, had been stopped by the lack of fuel that far forward of the beaches. The beaches had supplies building up in great piles, but the 129 Quartermaster Truck Companies had been overwhelmed trying to move all the supplies forward

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[27] Wayne M. Dzwonchyk, *A Brief History of the U.S. Army in World War II, The U.S. Army Campaign of World War II* (Washington DC, U.S. Army Center of Military History, 2003), 374.

[28] Ibid., 375.

to units moving further and further away. The army forces normally needed thirty percent of total tonnage in fuel, but during the pursuit the Army actually needed fifty percent of all cargo lift on trucks to be fuel. This problem was exacerbated by the fact that the fuel pipeline was being constructed at a rate of only five miles a day while the pursuit was moving eastward at the rate of ten miles a day.[29] By the end of August, the fuel pipeline was over two hundred miles behind the forward troops. To continue operations over such an extended line, an improvised solution was implemented that became known as the Red Ball Express. The Red Ball started on August 25, 1944, with a goal of moving eighty-two thousand tons of cargo by September 5, 1944. The route was a one-way circle through France, and these cargo trucks were the first priority for movement. It achieved the goal with almost five thousand gallons of extra fuel, allowing for a stockage safety margin. The Red Ball was a road network that greatly improved efficiency of the movement of cargo. It continued to operate at the much lower rate of five tons a day for the next two months.[30]

4) Use of reserves

World War II was an all-out war that required mobilization of the nation. Major combat operations in two theaters (European and the Pacific) required the activation of the reserve component and building of a much larger active duty military than the nation had in 1942, when it formally entered the war. Challenges initially experienced were a result of the low priority and spending on National Guard training and equipment in the years prior to World War II. In 1939, the National Guard had approximately half of the authorized four hundred thousand soldiers on the manning rolls.[31] A year after activation of a National Guard Division, most of the senior officers had been replaced by Regular Army officers due to

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[29] Geoffrey Perret, *There's a War to be Won, The United States Army in World War II* (Random House, New York, 1991), 370.

[30] Ibid., 368-371.

[31] Dan C. Fullerton, "Bright Prospects, Bleak Realities: The U.S. Army's Interwar Modernization Program for the Coming of the Second World War" (Dissertation, University of Kansas, 2006), 158.

medical fitness issues.[32] Although the Army had in excess of one hundred thousand officers in the Army Reserve and Army National Guard, the quality of their training was so poor that they required several additional months of intensive training. Chief of Staff of the Army, General Marshall, thought a better option would be using select enlisted men and training them in Officer Candidate Schools. The first class started in July 1941 at Fort Benning, GA. By August 1945, three-quarters of all company grade officers were Officer Candidate School graduates.[33] Regardless of designation of a Regular Army, Army Reserve, or Army National Guard, a soldier was serving on active duty until the war was completed and he was released from active service.

5) Use of contractors

During World War II, even with the high level of national mobilization, contractors on the battlefield augmented the Army. This occurred due to the growing sophistication of weapons and equipment. "Manufactures' technical representatives became a welcome supplement to military logistics and maintenance units, and civilian contractors were instrumental in establishing ordnance repair facilities in many parts of the world."[34] The ASF and the Army ran the logistics operations with limited assistance from contractors for technical expertise.

6) Summary

The WWII system of logistics was a large supply base and depot system. The intent of the model was to provide a flowing pipeline from manufacturing to the front. Numerous problems of logistics were related to the full-scale war in Europe. The nation managed to meet the need for huge amounts of materiel by gearing up its manufacturing base to accommodate the needs of the greatly expanded army and the

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[32] Ibid., 170-171.

[33] Geoffrey Perret, *There's a War to be Won, The United States Army in World War II* (New York, Random House, 1991), 114.

[34] Stephen P. Ferris and David M. Keithly, "Outsourcing The Sinews of War: Contractor Logistics," *Military Review*, LXXXI, no. 5 (September-October 2001): 76.

allies. However, the logistics challenges of getting these supplies to the front were numerous. German submarines attacked supply ships until the Navy found ways to neutralize the submarines and protect the supply shipping routes. Once supply routes were protected, numerous "liberty" ships were built to carry the logistics to depots in Great Britain. Logisticians carefully planned ways to get the supplies across the English Channel for the Normandy invasion.

Once troops moved inland, huge logistics problems developed following the advancement of the Army across Europe. Providing sufficient quantities of gasoline to power the engines of war was a never-ending problem. Pipelines were built in a continuing effort to provide needed gasoline to the war front but were not able to move as quickly as the breakout and pursuit of August of 1944; improvisation was needed to complete the incredible task of moving and sustaining a mechanized Army east and into Germany.

The capacity of America's industrial base to convert to manufacturing the supplies needed to sustain the war was enormously successful. However, logistical planning and execution were equally important if the manufactured supplies were to reach their target population. Oftentimes, logistical planning and execution were unwieldy and cumbersome, due in large part to the enormity of circumstances. The COMZ required huge quantities of materiel to be produced, shipped, and stored before finding the means to get the supplies where forces needed them. This problem was dealt with by continuing to push supplies forward and units reaching back to supply dumps and depots.

Many lessons were learned about logistics in World War II. The significance of careful logistical planning became of paramount importance to provide needed materiel over such great distances. Even though logistical planning was important, the ability of logistical personnel to improvise on site in order to overcome problems was of great significance to the war effort.

Vietnam War: Case Study 2

1) Background

The following case study will discuss the post-World War II period, using the Army in Vietnam as a model for the period. The Vietnam War, unlike World War II, represents the U.S. fighting a limited war, without a full-scale mobilization of the nation. During this period, the Army Logistics Structure operated by using a large supply base and supply depot system similar to that in the World War II European theater. In this case, the U.S. was supporting its ally, South Vietnam, as it fought an internal civil war with attacks from its neighbor North Vietnam. The U.S. Army again fought an expeditionary war deploying equipment and soldiers across the globe, but to a more austere environment. Although the war started as a small-scale advisory mission in support of the South Vietnamese, by 1965 the U.S. Army units were deployed and entered active combat against the North Vietnamese Army. Major combat operations took place over several years, primarily along the Cambodian border, against the North Vietnamese Army. Throughout the U.S. Army's involvement in the Vietnam War, units were fighting elements of major combat and counterinsurgency operations, even as stability operations were being conducted. This was a war that was fought without a large mobilization of the Reserve Component. U.S. Army units stayed in Vietnam, but the soldiers rotated in and out of theater after completing their year tour in combat.

The United States, fearing the growth of Communism if the North Vietnamese were victorious over the Democratic South Vietnamese, gradually began supplying the South with military assistance in the early 1960's during the height of the Cold War. As the Vietnam civil war grew, so too did U.S. military involvement. By 1969, a total of 543,000 U.S. military personnel were engaged in operations to support the government of the South Vietnamese, many in stability operations. At the same time, major combat operations were being fought along the Cambodian border against the North Vietnamese Army.

Thus, the U.S. involvement in Vietnam was fought as a limited war of choice to deter the spread of Communism.[35]

2) Logistics structure

The Military Advisory Command Vietnam (MACV) controlled logistics policy in planning in the macro sense in Vietnam. The United States Army Vietnam (USARV) was the Army service component command and responsible for all logistical support to the U.S. Army and to the five other Free World Military Assistance Forces that were participating in this conflict (South Vietnam, New Zealand, Australia, Republic of the Philippines, and the Republic of China). The Headquarters Commandant of MACV provided support to the Advisors through a stove-piped system that was executed through the U.S. military's four Services. Due to the influx of combat forces, the need to establish a Logistics Command in theater was recognized. On April 28, 1964, the 1st Logistical Command colors were transferred from Fort Hood, Texas and re-activated at Saigon. The Logistical Command was responsible for all supply, maintenance, transportation, and service. [36]

Subordinate to the Logistical Command were four support commands, each commanded by a general officer, that operated in support of the four Corps Tactical Zones (CTZ) that constituted the military boundaries of the Republic of Vietnam Army. Theater Army Support Command (TASC) and the Field Army Support Command (FASC) level logistics battalions and companies were assigned to Support Group headquarters that provided support to the combat brigades and divisions in their respective zones. As this was a non-linear conflict where most engagements were fought at the battalion level and below, the support structure deviated from the previously prescribed doctrine of a linear battlefield. Logistics Support Islands were established that resembled a hub-and-spoke system. Logistical Support Activities

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[35] Harry Summers, *On Strategy, A Critical Analysis of the Vietnam War* (New York, Dell Publishing, 1984), 62.

[36] 1st Logistical Command Internal Study, *The Logistics Review U.S. Army Vietnam 1965-1969*, Headquarters United States Army, Vietnam, I-4, II-1.

(LSA) and Forward Support Activities (FSA) were established as they were required to reach effectively the divisional units and separate brigades. FSAs were established as required depending on the location and duration of tactical operations away from established LSAs.[37]

An example of the support structure is best described by that of the 1st CTZ where the U.S. Support Command in Da Nang had two General Support Groups assigned, which provided support on an area basis. One General Support Group supported the 101st Airborne Division and two separate brigades in the Northern sector of the CTZ while the other supported the 23rd "Americal" Division and the Da Nang military area in the Southern sector of the CTZ.

3) Logistics flow

The logistics support system for the MACV sustained the advisors in their role of providing training and assistance to the South Vietnamese Army. As late as March 1965, no decisions had been made for deploying combat forces to South Vietnam; due to this fact, no action had been taken to prepare the South for an influx of U.S. combat forces.[38] The ports, airfields, and the distribution systems were assessed as completely inadequate to sustain an influx of U.S. combat forces. General William Westmoreland, Commander of MACV and United States Army Vietnam (USARV), stated that he was aware of the challenges of the logistics system as combat forces deployed.[39] In the introduction to the 1st Logistics Command's internal review, General Westmoreland stated, "There were inadequate ports and airfields, no logistics organization, and no supply, transportation, or maintenance troops. Nonetheless, in

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[37] Ibid., II-8, II-30.

[38] Ibid.: General William Westmoreland stated in reference to the logistic planning: "Although the first commitment of U.S. troops to combat drew the most attention in 1965, my concern as the commander was equally centered on the development of a logistical system to sustain and support the combat elements. As late as March 1965, no decision had been taken on U.S. intervention with ground forces other than the limited Marine security force deployed to protect the Da Nang airfield. Consequently, there was no logistic system in being, and no development of secure logistics bases except the totally inadequate installations associated with the South Vietnamese forces," I-4

[39] Graham A. Cosmas, *MACV the Joint Command in the Years of Withdrawal, 1968-1973* (Washington, DC: Center of Military History, 2007), 414.

the face of the grave tactical situation, I decided to accept combat troops as rapidly as they could be made available and to improvise their logistics support."[40] Once MACV's request for U.S. combat forces was approved, troops arrived into South Vietnam as quickly as possible. The level of the buildup of the combat forces determined the logistics requirements, as opposed to setting the logistical conditions on the ground first and then flowing in combat forces as the theater was prepared to accept them. MACV determined overall joint logistics policies and planning but left it to the Services to execute the logistics tasks. MACV's intent was for the logistics and combat forces buildup to be at the same pace, as complementary as possible. Strategic resources such as shipping and materiel were to be allocated to meet and maintain this balance. The result was that the Army quickly established major logistical support structures in areas that were not totally secure. Bases were built and the distribution networks established in areas that were not entirely under the control of U.S. forces but under observation of the enemy and subject to hostile fire.[41]

In 1966, Secretary of Defense McNamara stated that the U.S. had a "dollars for lives policy" as this was the most expensive war in U.S. history relative to enemy killed. [42] The U.S. produced and shipped to Vietnam the best equipment and materiel available in great quantity. Due to this surge of supplies, the logistical support system did not develop as the Army's logistics doctrine had intended. The inability to forecast accurate consumption rates led to great quantities of materiel being stored in depots in South Vietnam as materiel was "pushed" into the theater from the U.S. The fluid tactical situation and the mobility of U.S. forces compounded the challenges for the logisticians. Often these supplies were in the wrong location, hundreds of miles away from the combat soldiers who required them. Airlift was used

[40] 1st Logistical Command Internal Study, *The Logistics Review U.S. Army Vietnam 1965-1969*, Headquarters United States Army, Vietnam, I-4.

[41] Ibid., I-9.

[42] Ibid.

extensively to alleviate these distribution challenges with the resupply to firebases or stockage points via air common as an "emergency resupply" or as "combat essential" resupply in the field.[43]

Even with the challenges of distribution and attacks on facilities, the result was that of almost unlimited supply, high operational readiness rates on equipment, and what seemed an endless flow of ammunition and petroleum. According to the review conducted by the 1st Logistical Command, "The major problem encountered was the tremendous influx of supplies which were over the beaches and through the port flooding the depots under a massive sea of materiel and equipment, much of which was unneeded."[44] Supplies that were pushed from the States continued to build up in the depots; much of the materiel stored was not catalogued and thus, not managed. In later years, automation was introduced into the theater and the flow was adjusted to reduce unneeded supplies.

4) Use of reserves

In 1968, a comparatively small-scale activation consisting of sixty-three units of the Reserve Component was mobilized and ordered either directly or indirectly to support operations in Vietnam. A total of forty-two Army Reserve Units mobilized and deployed to Vietnam as logistical support or other

[43] Ibid., I-10.

[44] Ibid., II-3.

U.S. Army Reserve Mobilization, 1968

Type of USAR Unit	Number of units	Authorized Strength
Infantry Battalion	1	782
MI Detachments	2	64
AG Units	4	190
Composite Service Units	8	1,552
Medical Units	11	667
Finance Unit	1	40
Ordnance Units	2	313
Quartermaster Units	3	457
Transportation Units	10	1,814
Total	42	5,869

Source: Department of Minnesota Reserve Officers Association, "Reserve Units in Vietnam and South East Asia," http://www.mnroa.org/0703/research/vietnam_research_1.htm (accessed February 12, 2012).

Figure 2: U.S. Army Reserve

enablers. The above chart illustrates the very small numbers of units and soldiers that were mobilized from the United States Army Reserve as part of the only Reserve Component mobilization in support of the Vietnam War. The largest of these units were the Transportation Units (ten units of 1,814 soldiers) and the Composite Service Units (eight units of 1,552 soldiers).

Twenty-one Army National Guard units mobilized and eight deployed to Vietnam. The units that did not deploy conducted training and served as a strategic reserve.

U.S. Army National Guard Mobilization, 1968 -1969

Type of ARNG Unit	Number of units	Number of units Deployed to Vietnam
Infantry Brigade	2	0
MI Detachments	0	0
AG Units	0	0
Composite Service Units	2	0
Medical Units	2	1
Finance Unit	0	0
Ordnance Units	0	0
Quartermaster Units	1	1
Transportation Units	1	0
Infantry Battalion	1	0
Infantry Units	1	1
Engineer Battalion	1	1
Engineer Units	2	1
Field Artillery Battalion	3	2
Signal Units	1	1
Aviation Units	1	0
Armored Cavalry Battalion	1	0
Military Police Units	1	0
Total	21	8

Source: National Guard Education Foundation, "Army National Guard units Mobilized in the Vietnam War," http://www.ngef.org/index.asp?bid=48 (accessed March 6, 2012).

Figure 3: U. S. Army National Guard

The above chart is another illustration of the very small numbers of units and soldiers that were mobilized from the United States Army National Guard as part of the only Reserve Component mobilization in support of the Vietnam War. Only one combat unit, the Delta Company of the 1st Battalion of the 151st Infantry Regiment (Long Rang Surveillance) from the Indiana Army National Guard, deployed to Vietnam.[45] In addition, the 29th Infantry Brigade of the Hawaii Army National Guard served as a strategic reserve replacing the Army's 25th Infantry Division when it deployed from its home station at Hawaii to serve in Vietnam. Also, the 69th Infantry Brigade of the Kansas Army National Guard was activated and served in various roles in the continental U.S.; it deployed individuals as replacements that were integrated into regular army formations in Vietnam.

Due to political constraints, few Reserve Component units were mobilized during the Vietnam War, which impacted the logistical structure within the war zone. Although Secretary of Defense McNamara and the Joint Chiefs recommended the mobilization of the Reserve Component, making

[45] Ranger151, Company D, 151st Infantry, http://www.ranger151.com (accessed March 6, 2012).

several different requests over the years, President Lyndon Johnson never ordered the activation.[46] General Creighton Abrams is quoted as saying, "we [decided] to use the Army in Vietnam *minus* the National Guard and the Army Reserve."[47] The result was the American people were not supportive of the effort the military was making and a perception developed that the Army was alienated from the people it served.[48]

5) Use of contractors

During the Vietnam War, the Army began relying on contracted capabilities to fulfill some logistics requirements in lieu of activating capabilities from the Reserve Component. Stephen Ferris and David Keithly stated in their discussion on contractor provided logistics in *Military Review* that, "Because of low mobilization levels during the Vietnam War, military contractors again became indispensible."[49] This use of contractors was conducted specifically in the Base Operations Support areas, such as engineering and augmented transportation at the strategic and operational levels. As stated in the *Military Review*, "By 1969 military contractors were augmenting the logistics effort in Vietnam. Vietnamese citizens provided unskilled labor and it is estimated that over 52,000 non-Vietnamese were working in Vietnam as skilled laborers." These contractors "…provided construction, base maintenance, fuel supply, water and ground transport services, and support for high-technology systems in operational zones." [50] The employment of local civilian workers was an attempt to provide training and skills, as well as employment to the local Vietnamese. This program provided mixed results as absenteeism and concerns about security on bases affected the logistical units that employed these Vietnamese workers. In Vietnam,

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[46] Lewis Sorley, "Creighton Abrams and Active-Reserve Integration in Wartime," *Parameters* (Summer 1991): 38-40.

[47] Ibid., 38.

[48] Harry Summers, *On Strategy, A Critical Analysis of the Vietnam War* (New York, Dell Publishing, 1984), 54.

[49] Stephen P. Ferris and David M. Keithly, "Outsourcing The Sinews of War: Contractor Logistics," *Military Review*, LXXXI, no. 5 (September-October 2001): 76.

[50] Ibid.

there were no linear boundaries as depicted in Army doctrine and thus no Army service area was able to be maintained which provided logisticians sanctuary to work; the combat zone and the COMZ were one and the same. Attacks on logistical facilities consisting of small arms fire, rocket attacks on facilities, and convoy ambushes were common throughout the U.S. involvement.[51]

6) Summary

The nature of the fight was primarily a counter-insurgency, with major combat operations conducted in the North along the border areas, which was different than any previous U.S. Army war. Regardless of the type of enemy encountered and the type of combat action initiated, it was a non-linear fight that did not fit into Army doctrine. The combat units arrived in Vietnam at the same time as logistic units which made it challenging to set the logistics posture of the theater. Consequently, the logisticians had to make adjustments. They adapted by establishing "Islands of Support" that enabled the combat forces to be sustained. Neither the ports nor storage depot centers could be completely secured which required the logisticians and other support personnel to often work in the areas that were subject to attack. [52] Furthermore, the Army fought the Vietnam War without a call up of Reserve units. The lack of the Reserves created challenges for the logistical support structure and necessitated a growing reliance on contracted support.

The problems encountered during the Vietnam War led to changes in the Army structure of the following decade. There are two factors that served as the impetus for the Total Force Concept that the Department of Defense adopted in the early 1970's.[53] One factor is that the Total Force Concept grew out of political pressures experienced by the military during the Vietnam War, the other being the reaction by

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[51] 1st Logistical Command Internal Study, *The Logistics Review U.S. Army Vietnam 1965-1969*, Headquarters United States Army, Vietnam, II-22.

[52] As a response to attacks on convoys, Gun Trucks were developed by welding metal and sandbagging cargo trucks used as convoy escorts, much like those built in response to similar conditions in Operation Iraqi Freedom.

[53] Chris Downey, "The Total Force Policy and Effective Force," (Monograph, U.S. Army War College, 2005), 3.

the military to the economic pressures the country was facing at the end of the Vietnam War. Military budgets were reduced because of the recessed economic situation in the U.S.

Economic realities, a desire to build a better ground combat-capable Army, and lessons learned during the Vietnam War led the Army leadership in the early to mid-1970's to place Army Force Structure needed for the next large-scale employment of force in the Reserve Component. General Abrams wanted to increase the Regular Army from thirteen divisions to sixteen divisions, but he was unable to secure support for the funding of sixteen divisions. By transitioning Regular Army logistics units into the Reserve Component, General Abrams was able to harvest the savings of Regular Army authorizations to increase the Army's combat forces. "They're not taking us to war again without the Reserves!" said Abrams, a vow heard often by General Walter Kerwin, Jr., Deputy Chief of Staff for Personnel.[54] As a result, this ensured that the next war the nation called on the Army to fight was not going to be as politically divisive and hard on the Army as had the Vietnam War. The lack of political support for the Vietnam War was especially difficult on the Army and the soldiers who fought what became a long, unpopular war. [55]

Historian and military thinker Lewis Sorley describes General Abrams' thoughts when he was the Army Chief of Staff in the mid-1970's, as he looked back on the challenges the Army faced in 1964 and 1965: The Dominican Republic intervention, the size of the force required in Europe and Korea, and the growing commitment of forces in Vietnam (there were 100,000 soldiers supporting the Military Advisor

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[54] Re-quoted from Lewis Sorley, "Reserve Components: Looking Back to Look Ahead," *Joint Forces Quarterly*, 36 (December 2004): 22.

[55] Lewis Sorley, "Creighton Abrams and Active-Reserve Integration in Wartime," *Parameters*, (Summer 1991): 35: Retired U.S. Army Colonel Harry Summers writes in his book, *On Strategy, A Critical Analysis of the Vietnam War*, that the Army was caught between President Johnson and the people of the Nation because the Vietnam War had ill-defined goals. Ultimately, Americans did not feel a compelling need to send their sons to fight and, in the case of 58,209, die in defensive of the Republic of South Vietnam. He continues, "In the later stages, when the Vietnam War became a partisan political issue, the Army was placed in the untenable position of becoming involved in domestic politics solely because it was obeying its orders.": Harry Summers, *On Strategy, A Critical Analysis of the Vietnam War* (New York, Dell Publishing, 1984), 55.: For a listing of casualties throughout the U.S. various conflicts see, Hannah Fischer, "American War and Military Operations Casualties: Lists and Statistics", Congressional Research Service, June 2009. 3. (http://www.fas.org/press/_docs/RL324f92.pdf (accessed April 1, 2012).

Mission in Vietnam prior to deployment of active combat units). General Abrams stated that the arrangement was that of one overall Army with certain complementary capablities in all three Components. He supported the use of the Active, National Guard and the Army Reserve together.[56] Although Secretary of Defense McNamara and the Joint Chiefs recommended the mobilization of the Reserve Component, making several different requests over the years, President Johnson never ordered the activation.[57] General Abrams is quoted as saying, "we [decided] to use the Army in Vietnam *minus* the National Guard and the Army Reserve." [58].

In 1970, Secretary of Defense Melvin Laird initiated a study to explore the options for a future construct of the Army, one that would ensure the nation's support of the Army the next time the Army went to war. The result of this study became the Total Force Concept, which was ratified in 1973 by Secretary Laird's successor, Secretary of Defense James Schlesinger, as formal DoD and Army policy. General Creighton Abrams, the Army Chief of Staff, published the plan for the Army's structure and the evolving doctrine in 1974. His plan relied on the mobilization of the Reserve Component for any Army operations larger than small-scale contingencies and the use of more private contractors to provide essential services.

The Total Force Concept relied on the Regular Army and the Reserve Component equally for the defense of the nation. Due to several factors, including the Army National Guard's historical linkage to the militia and recognition of its combat role in WII, the Army National Guard maintained a preponderance of the combat units and the Army Reserve was tilted in scale towards more combat service

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[56] Lewis Sorley, "Creighton Abrams and Active-Reserve Integration in Wartime," *Parameters*, (Summer 1991): 40: Lewis Sorely documents several examples and quotes from those close to General Abrams verifying that General Abrams felt that a full-scale Reserve Component Mobilization in 1967 would have been the best option to support the requirement for combat forces in Vietnam. Sorely states that, "No aspect of American defense policy since World War II has been more contentious, complex, and unsettled than that of reserve forces. For many years it has been believed in the Army that it was General Creighton Abrams' intention, when he served as Chief of Staff late in the Vietnam era, to so organize the forces that it would never again be possible to take the Army to war without its reserves. My research for a biography of General Abrams has documented the validity of that belief."

[57] Ibid., 38.

[58] Ibid.

and combat service support units.[59] By treating the Regular Army, the Army National Guard, and the Army Reserve as one army, the Total Force Concept entwined the structure of the Army into one with the intent being that the Regular Army could not conduct another protracted force projection operation without a Reserve Component Mobilization by the President of the U.S. By having to call up the Reserves, a President would have to have the support of the U.S. Congress, and in essence, the support of the American people. All of this was in response to the Department of Defense and Army senior leaders' experiences in Vietnam, where the U.S. Army fought without a large-scale mobilization of the Reserve Component.[60]

[59] Combat Service Support: The essential capabilities, functions, activities, and tasks necessary to sustain all elements of operating forces in theater at all levels of war. Within the national and theater logistic systems, it includes but is not limited to that support rendered by service forces in ensuring the aspects of supply, maintenance, transportation, health services, and other services required by aviation and ground combat troops to permit those units to accomplish their missions in combat. Combat service support encompasses those activities at all levels of war that produce sustainment to all operating forces on the battlefield, *Joint Publication 4-0*: GL-5.

[60] Lewis Sorley, "Creighton Abrams and Active-Reserve Integration in Wartime," *Parameters*, (Summer 1991): 38.

Operation Desert Shield/Desert Storm Logistics: Case Study 3

1) Background

In August 1990, Saddam Hussein, leader of the government of Iraq, sent his military into Kuwait and quickly invaded the country. U.S. President George H.W. Bush opposed the occupation and worked to line up international support for the removal of Iraqi forces from Kuwait. For several months, a large buildup of U.S. forces was deployed to protect Saudi Arabia, which served Operation Desert Shield, as a base for troops and logistical support. Once sufficient force levels were attained, the mission morphed into Operation Desert Storm with the air war beginning in January 1991, followed in February by the ground war. Within a few days, all Iraqi forces fled Kuwait as the army of Iraq was soundly defeated. The President and his advisors decided not to send troops into Baghdad in pursuit of the government of Hussein. The reasons behind this decision were that the military goal of freeing Kuwait had been achieved and civilian and military leaders did not want to get bogged down in a larger land war in the Middle East. This war was fought as a limited war of choice, with the aim of expelling the Iraqi Forces from Kuwait. There was no mandate or support by the countries that made up the coalition to attack deep into Iraq and topple the regime. After a lengthy buildup period (Desert Shield), major combat operations took place with the Army assaulting into Kuwait to attack the Iraqi forces in a short hundred-hour war (Desert Storm).[61]

2) Logistics structure

On August 8, 1990, the first small group of logisticians landed in Saudi Arabia to begin planning the logistical support for Operation Desert Shield and to set up the conditions for Operation Desert Storm's offensive action. As Lieutenant General William Pagonis, Commander of the Theater Logistics

[61] Richard M. Swain, *Lucky War, Third Army in Desert Storm* (Washington, DC: Center of Military History United States Army, 1997), xxv.

forces, stated, "Since the National Command Authority had made the decision to immediately send combat units of the XVIII Airborne Corps to Saudi Arabia ahead of their support elements to deter Iraqi aggression, the small group of logisticians that landed on 8 August 1990 became the nucleus of all logistics support for Army troops arriving in country."[62] On August 18, 1990, the Army Central Command established a provisional logistics headquarters, the 22nd Support Command (SUPCOM) (Theater Army Area) (TAA) commanded by a Lieutenant General. The SUPCOM was established to control all sustainment support in Operation Desert Shield to the Army as well as the support provided to the other services. The three specific tasks the SUPCOM conducted were: the reception of forces, the onward movement of these forces to lodgments, and the sustainment of the force. The Corps Support Commands (COSCOM) commanded and controlled several Corps Support Groups and their subordinate battalions and companies that provided direct support to their assigned combat divisions flowing into theater between August of 1990 and January of 1991.

3) Logistics flow

The Army mobilized and deployed forces to Southwest Asia to conduct Operations Desert Shield and Desert Storm. During this period, the Army Logistics Structure still operated large supply bases and supply depot systems, although attempts were being made to begin a more distribution-based system. Supplies were pushed from the manufacturers and the supply bases in the continental U.S. and from the supply bases in Europe onward to South-West Asia.[63] From there they sat in large depots, often at or near the ports. The Aerial Port and Sea Ports were established in modern facilities provided by the Saudi Government. The local road network was excellent around and to the major cities. As soldiers flowed into theater, the local national distribution network did much of the movement of materiel to base camps.

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[62] William G. Pagonis and Harold E. Raugh, "Good Logistics is Combat Power," *Military Review*, LXXI, no. 9 (September 1991): 29.

[63] Kenneth Ervin King, "Operation Desert Shield: Thunderstorm of Logistics: Did We Do any Better during post Cold War Interventions?" (Monograph, U.S. Army War College, 2007), 8.

The challenge for Desert Storm leaders and logisticians was "…one of distribution."[64] Supplies would arrive into the ports, pile up, and no one could find quickly what was needed amidst the unorganized piles. This distribution challenge was never fully overcome for several reasons. One factor was the late arrival of logisticians into the theater. The second major factor was the inadequate or nonexistent in-transit visibility (ITV).[65] Both of these issues had a significant bearing on the logistics challenges encountered and were never actually overcome. The late arrival of the logisticians in theater occurred because U.S. Central Command had no significant existing logistics infrastructure in Saudi Arabia. The problem was compounded by the decision to push combat forces into the theater immediately; therefore, the logisticians were always struggling to set up a sustainment system to facilitate the combat forces. Ultimately, the operations were supported logistically, but the support was described as a brute force effort by all logisticians. This effort was not a sustainment operation of finesse; it did not closely follow the doctrine of the time, which prescribed that combat soldiers were prioritized to arrive in theater ahead of the logisticians due to the threat of Iraq invading the Kingdom of Saudi Arabia.[66]

Due to the lack of ITV of what actual sustainment stocks were on the way in the pipeline, units at all levels continued to order the same parts, often repeatedly. The lack of confidence in the supply and distribution system, as well as the continuous, multiple reordering of items, placed even more stress on the distribution system. For example, individual unit mechanics and supply personnel called directly to the National Level Item Managers for release and for the expediting of parts that were actually already in

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[64] Richard M. Swain, *Lucky War, Third Army in Desert Storm* (Washington, DC: Center of Military History United States Army, 1997), xxvii.

[65] In-Transit Visibility: The ability to track the identity, status, and location of Department of Defense units, and non-unit cargo (excluding bulk petroleum, oils, and lubricants) and passengers; patients; and personal property from origin to consignee or destination across the range of military operations, http://www.dtic.mil/doctrine/dod_dictionary (accessed April 7, 2012).

[66] William Pagonis and Jeffrey L. Cruikshank, *Moving Mountains: Lessons in Leadership and Logistics from the Gulf War*. (Boston: Harvard Business School, 1992), 89-90: LTG Pagonis states as he describes the early planning and execution of desert Shield, "The goal, Yeosock told me, was to establish a civilian infrastructure to support our now-definite intervention. It would be complicated: General Schwarzkopf had concluded that we had to deploy our combat forces as rapidly as possible, using our limited rapid sealift and airlift resources, so that we could get enough force on the ground to defend the Saudis. The military logistical forces would have to wait—and to fill the logistical void, we would have to use host nation assets" 76.

route to them. Senior leaders and staff officers spoke directly to the depots and Continental U.S. (CONUS)-based senior leaders, who activated more sustainment stocks to flow into the theater. This also compounded problems; the ports had limited materiel handling/port handling equipment and onward movement capability, thus leading to chaotic "iron mountains" of materiel on or near the ports.[67]

Individuals at the unit level had their confidence in the supply system shattered when their unit equipment was misrouted and delayed. One issue that continued to exacerbate these delays occurred because unit level containers were opened at multiple locations and points along the distribution chain to determine what the items were and where they were to be sent, as final destinations often changed several times. These multiple openings of containers and other bottlenecks at the distribution points led to the loss of some unit level equipment. [68] Eventually, over several months, the system leveled out and stocks were built up in the theater to support the sizable U.S. Army and the Coalition forces. The short 100-hour duration of offensive action of Operation Desert Storm illustrated the enormous challenges the Army logisticians would have encountered if they had been required to support an extended conflict.[69] A great challenge for logistics leaders would have been determining the location of supported units that required materiel for delivery and even ordering materiel. Had the war been prolonged, this would have resulted in units not getting needed materiel at their new operating positions further into Iraq at the same speed and manner as had developed while static in Kuwait.

4) Use of reserves

Many Reserve Component units were activated for Operations Desert Shield and Desert Storm. Of these activated Reserve Component units, the preponderance were from the Army Reserve with over

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[67] Richard M. Swain, *Lucky War, Third Army in Desert Storm* (Washington, DC: Center of Military History United States Army, 1997), 37.

[68] Roslyn M. Goff, "The 54th Forward Support Battalion in Desert Shield/Storm" (Monograph, U.S. Army War College, 1992), 23.

[69] William Pagonis and Jeffrey L. Cruikshank, *Moving Mountains: Lessons in Leadership and Logistics from the Gulf War* (Boston: Harvard Business School, 1992), 149.

84,000 Army Reserve soldiers being mobilized. Over seventy-five percent of the 22nd SUPCOM (TAA) down trace units were from the Reserve Component (they were praised for executing their support mission well by the Commander of 22nd SUPCOM (TAA)).[70] The activation of these Army Reserve Component units for the echelon above division logistics structure for Operations Desert Shield and Desert Storm illustrated the U.S. Army's reliance on the Reserve Component and validated the Total Force Policy goal of integrating the Regular Army, Army National Guard, and Army Reserve into one Army. The Army Reserve was critical to both projecting the force and sustaining that force once deployed.

The great preponderance of activated Army Reserve soldiers served at the strategic or operational levels, but some individual Army Reservists actually served down at the brigade level. The low-density support military occupational skills were a critical shortage in many Regular Army units that were preparing to deploy and that did deploy to Operation Desert Shield.[71] To fill these Regular Army shortages, some reservists were activated and assigned to the Regular Army units.[72]

5) Use of contractors

Contractors were used extensively in Kuwait for local transportation and base life support. Host nation support was critical to distribution within Saudi Arabia.[73] Direct contracts with individual vendors

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[70] William G. Pagonis and Harold E. Raugh, "Good Logistics is Combat Power," *Military Review*, LXXI, no. 9 (September 1991): 38.

[71] Low-density is a term used to describe the specialized military occupational skills (MOS) that make up a small portion of a units personnel manning. For example, an infantry battalion would have primarily infantrymen assigned to it. The ten cooks (MOS 92G) assigned to the battalion are low-density to an infantry battalion. Common usage in the military from the author's experience.

[72] Roslyn M. Goff, "The 54th Forward Support Battalion in Desert Shield/Storm" (Monograph, U.S. Army War College, 1992), 27.

[73] William Pagonis and Jeffrey L. Cruikshank, *Moving Mountains: Lessons in Leadership and Logistics from the Gulf War* (Boston: Harvard business School, 1992), 107. Lieutenant General William Pagonis, the senior logistician planning and sustaining Operation Desert Shield/Desert Storm, stated in his memoirs, "Quick analysis of the situation by military leaders, both in the United States and in Saudi Arabia, led to the conclusion that our limited-and-precious transport space should be reserved for combat troops, and for those supplies, such as weapons and ammunition, that could not be procured in theater. Everything else was our problem, to be found and contracted for."

were the only way to conduct contracted support.[74] Many contracts had to be negotiated in theater for such things as civilian trucks, buses, and even water. In addition to the local contracts negotiated, the total U.S. effort in Operation Desert Storm required seventy-six individual contracts to be negotiated and awarded with U.S.-based contractors who provided over 9,000 U.S.-based personnel.

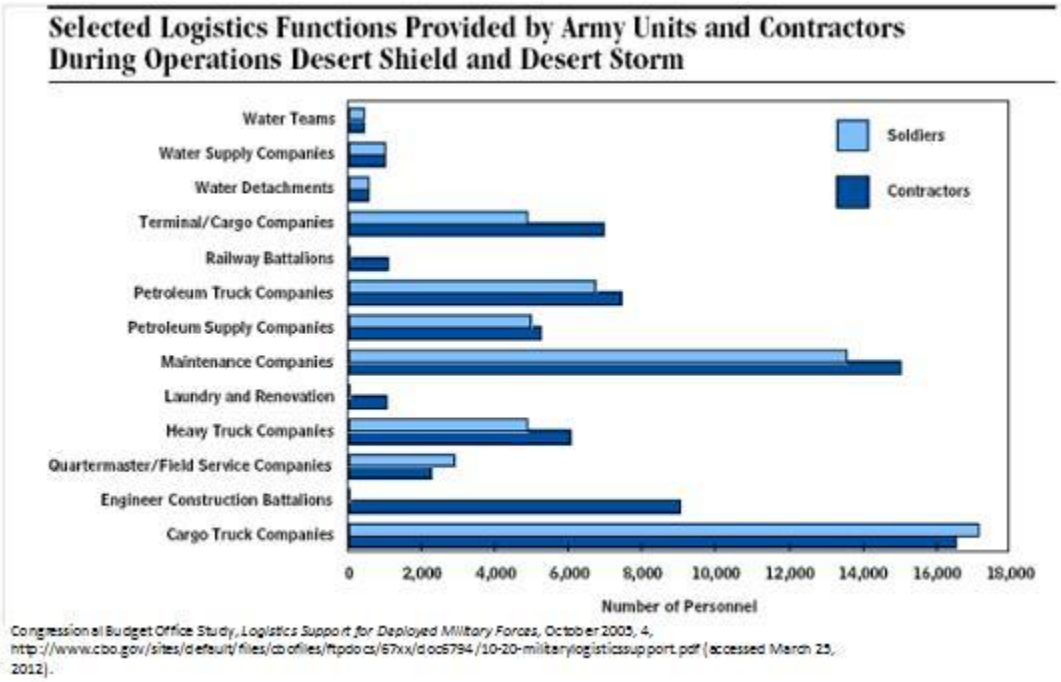

Figure 4: Logistics Functions

The chart above illustrates the functions carried out by soldiers and contractors in Operation Desert Shield/Desert Storm. Over sixty thousand soldiers supported Desert Shield/Desert Storm and over seventy thousand contractors.[75] The contractors provided vital support that allowed many of the low-density support soldiers to serve in their authorized positions in combat and support units. The Government of Saudi Arabia provided over 1.5 million gallons of petroleum to U.S. forces daily, transportation support

[74] Direct contract: any contract that is negotiated for a separate and unique service. A contract in support of a unit to get gravel in a parking area is an example.

[75] Congressional Budget Office Study, *Logistics Support for Deployed Military Forces*, October 2005, 4, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/67xx/doc6794/10-20-militarylogisticssupport.pdf (accessed March 25, 2012).

of over four thousand trucks, and more than two billion dollars' worth of food during the operation.[76] This contracted and host-nation support was vital to the success of the effort and reduced the requirement for U.S. personnel.[77]

6) Summary

In conclusion, during Operation Desert Shield/Operation Desert Storm, the inefficient but ultimately effective supply flow was one of the major problems experienced by the Army. The second major problem was the serious lack of a significant logistics infrastructure in place ahead of combat forces. The effects of these problems were duplication of stocks, rerouting of supplies, stress on the system, chaos, and a general lack of confidence in the logistical distribution and flow. Due to these problems, Army logisticians began looking at improving distribution of materiel through new technologies and civilian best practices.

One solution to the logistical problems demonstrated during Operation Desert Shield/Operation Desert Storm War was to increase reliance on contracting with private companies to provide the needed logistics support for the combat soldiers. Essentially, the Army began to contract out many services that were not directly related to military combat operations. The Army emphasized the movement to Logistics Civil Augmentation Program (LOGCAP) in response to the lessons learned negotiating direct contracts "on the fly" or "in stride" during Desert Shield/Desert Storm. LOGCAP allowed the U.S. Army and department of Defense to have assurance that a civilian support capability would be available to augment military logisticians when the next deployment occurred.[78] The LOGCAP III contract was awarded to

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[76] Ibid., 12.

[77] Host-nation support: Civil and/or military assistance rendered by a nation to foreign forces within its territory during peacetime, crises or emergencies, or war based on agreements mutually concluded between nations, http://www.dtic.mil/doctrine/dod_dictionary (accessed April 7, 2012).

[78] Logistics Civil Augmentation Program (LOGCAP): Advanced acquisition planning which provides for the use of civilian contractors during wartime and unforeseen military emergencies to augment the U.S. Army combat support and combat service support capability. The contract support will be arranged through combined

Kellogg, Brown and Root (KBR) in December 2001, which has since supported military operations in Afghanistan, Iraq, and other areas. LOGCAP III completed its ten-year contract life and LOGCAP IV was awarded in 2007. LOGCAP IV was divided between three primary contractors, KBR, Fluor, Dynacorp and a fourth Serco, that provide primarily administrative support.[79] LOGCAP is much more flexible than activating Reserve Component units, as LOGCAP is required to respond within fifteen days from receiving a task order. LOGCAP has the advantage of being able to buy equipment locally in the theater, whereas Regular Army and Reserve units are tied to their own military equipment and procurement processes, which require strategic air or sea-lift to reach the theater.[80]

A second solution to the logistical problems of Desert Storm/Desert Shield was Focused Logistics, a concept introduced by Joint Logisticians in the early part of the 1990's.[81] The impetus for Focused Logistics was partly due to recent lessons learned but also from emerging business concepts for improving the efficiency of the supply chain through distribution and asset visibility.[82] At the same time, the military was undergoing a revolution in thinking about the overall business of warfare.[83] The U.S. military has long looked to the business world for examples to gain efficiencies in the business enterprises that make up the Department of Defense.[84] The late Twentieth Century saw a rapid revolution in technologies and distribution take place in business; and the Department of Defense worked to utilize

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advanced acquisition and operations planning, *Army Regulation 700-137,* 16 December 1985*,* Logistics Civil Augmentation Program (LOGCAP) http://www.apd.army.mil/jw2 (website accessed January 25, 2012).

[79] Army Sustainment Command, *"Army Segues from LOGCAP III to IV,"* March 27, 2009, http://www.army.mil/article/18864/ (accessed March 25, 2012).

[80] Congressional Budget Office Study, *Logistics Support for Deployed Military Forces*, October 2005, pxi, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/67xx/doc6794/10-20-militarylogisticssupport.pdf (accessed March 25, 2012).

[81] John J. Cusick and Donald C. Pipp, "Focused Logistics," *Joint Forces Quarterly* (Spring 1997): 125.

[82] Office of the Joint Chiefs of Staff, *Joint Vision Implementation Plan* (Washington, DC: Government Printing Office, December 9, 1998).

[83] Focused logistics concept occurred concurrently with the Revolution in Military Affairs (RMA). Richard Hundley, "Past RMAs, Future Transformations: What Can History Tell Us About Transforming the U.S. Military?" (RAND Corporation, May 1999).

[84] William Pagonis and Jeffrey L. Cruikshank, *Moving Mountains: Lessons in Leadership and Logistics from the Gulf War* (Boston: Harvard Business School, 1992), 211-219.

these new, emerging best practices of business to support what was described as a Revolution in Military Affairs.

The Focused Logistics concept was developed with three broad themes in support of Joint Logisticians. They were to "enhance strategic responsiveness, reduce logistics costs, and reduce the log footprint."[85] All three of these themes facilitated the logisticians' need to respond to changes in the strategic environment. Specifically, the reduced defense spending after the Reagan Administration's early build-up of the military and the reduced size of the military after the Cold War required more responsive logistics at a reduced cost to the nation. Fiscal savings were accomplished through a reduction in materiel inventories, military personnel end strength, and facilities devoted to logistics capabilities.[86] The Department of Defense inventory of spare parts and personal demand items stored in warehouses has been reduced fifty-five percent from 1989 to 2003.[87]

In the early years of the Twenty-first Century, the Joint Staff and Services refined the continued transformation of Logistics. The Under Secretary of Defense for Acquisition, Technology, and Logistics was designated as the Defense Logistics Executive, established as the one staff proponent/agency charged with managing the Defense Department's supply chain. In addition, the United States Transportation Command (USTRANSCOM), a functional combatant command, was designated as the Distribution Process Owner. As the Distribution Process Owner, USTRANSCOM operates with a mandate to provide strategic oversight of "interoperability, synchronization, and alignment of Department of Defense wide, end-to-end distribution."[88] In other words, USTRANSCOM is responsible to oversee all Department of Defense distribution. Thus, the Army addressed the logistical problems experienced in Desert

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[85] Department of the Army, "The Army Modernization Plan 2002," (Washington, DC: United States Army, 2002), A-55.

[86] Victor Maccagnan, "Logistics Transformation Restarting a Stalled Process," http://www.carlisle.army.mil/ssi (accessed February 25, 2012).

[87] Joint Warfighting Center "Joint Vision 2010 A Joint Logistics Roadmap" (Fort Monroe, VA: Joint Staff, 2010): 44.

[88] Joint Chiefs of Staff, Joint Publication 4-0, *Joint Logistics* (Washington, DC: Government Printing Office, July 18, 2008): II-7.

Shield/Desert Storm by improving distribution of materiel, incorporating new technology, and utilizing civilian best practices.

Operation Iraqi Freedom: Case Study 4

This section of the paper discusses Operation Iraqi Freedom (OIF) in two distinct sections, as the first campaign was an offensive combat action beginning in 2003 that was over in less than two months. The second stability operation phase that followed involved several campaigns over the subsequent eight years ending in December 2011.

Section One: Campaign of Liberation

1) Background

Operation Iraqi Freedom's ground invasion of Iraq, named the Campaign of Liberation of Iraq, took place between March 19 and May 1, 2003. Even as all wars have different aims and objectives, this was a different kind of conflict than the U.S. had fought in the recent past.[89] From the U.S. perspective, this was a limited war of choice that was initiated on the timeline of the U.S. National Command Authority, the U.S. Forces, and the supporting Coalition Forces. The strategic U.S. goal was regime change.[90] The removal of Saddam Hussein and his ruling Ba'athist party from power was accomplished during this campaign.[91] As the investigative journalist and author Bob Woodward writes about the build up to and execution of Operation Iraqi Freedom, some senior officials in the administration of U.S. President George W. Bush had been thinking about a more aggressive policy towards Iraq. [92] However, a U.S. attack on Iraq gained momentum after the terrorist attacks of 9/11.[93] Ultimately, the administration's pre-emption doctrine and a perceived threat of a weapons of mass destruction (WMD) capability by Iraq

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[89] Executive Order: "Establishing the Afghanistan and Iraq Campaign Medals," (The White House, Washington, DC, November 29, 2004), http://georgewbush-whitehouse.archives.gov/news/releases/2004/11/20041129-11.html (accessed March 19, 2012).

[90] Bob Woodward, *Plan of Attack* (New York: Simon and Schuster, 2004), 137.

[91] Gregory Fontenot, *On Point, The United States Army in Operation Iraqi Freedom, Through 01 May 2003* (Fort Leavenworth KS: Combat Studies Institute Press, 2004), xxiii.

[92] Bob Woodward, *Plan of Attack* (New York: Simon and Schuster, 2004), 21.

[93] Ibid., 1, 21.

led to the U.S./Coalition attack on Iraq that began on March 19, 2003.[94] This was a different kind of war because the U.S. had been preparing the infrastructure in the region, for just such a contingency, since the end of Desert Storm in 1991. It was also the first major conflict in which the U.S. Army's Service Component Command actually served as a Combined Land Forces Command (CFLCC). As the CFLCC, the U.S. Army Central (ARCENT) both controlled ground operations and coordinated theater support through the assigned Theater Sustainment Command.

This was a major combat operation that was conducted by an expeditionary force that spent little time preparing in theater. OIF was envisioned as a lighter, more nimble version of Operation Desert Storm (without the months of building the combat force that took place during Operation Desert Shield). OIF combat operations began with a "running start" of the units of the U.S. Army's 3rd Infantry Division and the 1st Marine Expeditionary Force (roughly equivalent to the size of an Army division) crossing the U.S. built dirt berm that separated Kuwait from Iraq, even while other combat and support units were flowing into the theater. OIF also was a test of the Army's modularity concept that was a movement away from division centric force to a lighter, more deployable modular brigade centric force. The combat test of the modularity concept through combat in OIF was similar to the validation of the Total Force Concept by its use in Operation Desert Shield/Desert Storm.

2) Logistics structure

United States Central Command (CENTCOM) and ARCENT had been preparing the theater for the potential of conflict with Iraq since the end of Desert Storm and had a logistics support system built around the 377th Theater Sustainment Command (TSC), a multi-component USAR organization that was based in Louisiana and forward deployed with rotational forces in Kuwait at Camp Doha. The TSC had relevant experience at their static support mission, and the infrastructure was well developed from the many years of sustaining the Army Brigades that served the six-month rotational deployments as part of

[94] Ibid., 34, 132-134, 137-138.

the Intrinsic Action series of exercises in defense of Kuwait.[95] The TSC, however, was not ready for the new challenge of quickly pushing forward masses of equipment and supplies from the ports to staging areas, to units as they maneuvered into Iraq.[96] This problem occurred due to a shortage of materiel handling equipment at the ports and sufficient trucks to clear the staging areas and push the supplies and equipment forward to unit staging areas and to follow the attacking combat forces into Iraq.

3) Logistics flow

Although CENTCOM had a standing plan for the forces required and the flow of those forces into theater, the plan was not executed as conceived. The time-phased force and deployment list (TPFDL) that supported the plan was manipulated to bring combat forces into theater prior to the echelon above the division and brigade forces that were required by the TSC to sustain ground combat. The "running start" began combat operations even as military forces continued to flow into the theater. This resulted in a lack of logistical capability for the 377th Theater Sustainment Command (TSC) and the Corps Support Commands.[97] For instance, there was a shortage of military transportation or "green trucks" of all types during this period to push the needed materiel forward to the combat forces.[98] The Army had the prepositioned equipment of two brigades available, staged, and utilized in Kuwait, which reduced the initial requirement for strategic movement. Follow-on materiel flowed from the continental U.S. and Europe into the well-developed ports in Kuwait. But no capacity existed to move all required materiel

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[95] The CENTCOM exercise Intrinsic Action, allowed U.S. Army brigades to fall in on a pre-positioned set of equipment in Kuwait and train in desert operations. This exercise allowed lessons to be learned and implemented on the reception, staging, and onward movement of units into the theater: Gregory Fontenot, *On Point, The United States Army in Operation Iraqi Freedom, Through 01 May 2003* (Fort Leavenworth KS: Combat Studies Institute Press, 2004), 29, 31, 66.

[96] U.S. Army Operation Iraqi Freedom Study Group, "U.S. Army Operation Iraqi Freedom Observations Quick Look," (Leavenworth, KS: Center for Army Lessons Learned, August 2003), 16, https://call2.army.mil/oif/brief.asp (accessed January 2, 2012).

[97] Ibid., 57.

[98] Green trucks: commonly used military term for military cargo trucks. White trucks: term used for any contracted cargo / transportation truck.

forward along with the rate of the advance, which in the case of the 1st Marine Expeditionary Force was 700 miles.[99]

The OIF invasion was the first major combat operation fought by the U.S. using aspects of the Focused Logistics Concepts developed in the 1990's in response to lessons learned from the coalition war of Desert Shield and Desert Storm.[100] Instead of the materiel massed in great quantities of the supply-based logistics system, as was used in Desert Shield/Desert Storm, OIF utilized a distribution-based system that emphasized velocity management. The Distribution Based System (DBL) concept had been implemented as part of the Revolution in Military Logistics that was an integral part of the Revolution in Military Affairs (RMA) that took place in response to lessons learned in Desert Shield/Desert Storm.[101] DBL was a significant change. In the supply-based logistics system, materiel was stockpiled in depots that became "iron mountains," having to be maintained at numerous supply nodes throughout the theater. DBL is a "just in time system" that requires just enough materiel supplies to allow the combat force to continue operations. In-transit visibility (ITV), enabled by new technologies and new decision support tools developed in the 1990's (such as better radio frequency tagging of all equipment and tri-wall boxes in transit), ensured that the combat force and the sustainment managers were both aware of the requirements and of the flow of supplies forward to fill the combat forces sustainment requirements. An advantage of the DBL system is that it also reduced the requirements for strategic lift, be it via air or sea; and, because less materiel flowed into the theater, competition between supplies and combat forces and their equipment was reduced.[102]

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[99] U.S. Army Operation Iraqi Freedom Study Group, "U.S. Army Operation Iraqi Freedom Observations Quick Look," (Leavenworth, KS: Center for Army Lessons Learned, August 2003), 15.

[100] John J. Cusick and Donald C. Pipp, "Focused Logistics," *Joint Forces Quarterly* (Spring 1997), 28.

[101] Richard Hundley, "Past RMAs, Future Transformations: What Can History Tell Us About Transforming the U.S. Military?," (RAND Corporation, May 1999).http://www.rand.org/pubs/research_briefs/RB7108 (accessed January 2, 2012).

[102] Eric Peltz, John M Halliday, Marc L. Robbins, Kenneth J Girardini, "Sustainment of Army Forces in Operation Iraqi Freedom: Battlefield Logistics and Effects on Operations," (Monograph, RAND Corporation, 2005), xi. http://www.rand.org/pubs/monographs/2006/RAND_MG344.pdf (accessed October 2, 2011).

4) Use of reserves

By the end of this initial campaign period, over 120,000 of the 369,000 soldiers serving in the CENTCOM Theater were Reserve Component soldiers.[103] Unlike WWII, where the preponderance of the Army National Guard served in combat roles, only six National Guard Infantry battalions served in a combat role in Iraq, where the preponderance of these reservists were support soldiers of various types, "… providing the bulk of the soldiers who operated the ports, hauled fuel, repaired equipment, and sustained the theater in general."[104] These reserve soldiers were assigned to the echelon above brigade, Theater and Corps level logistics units, that enabled the Army to support large-scale contingencies.

5) Use of contractors

Contractors, too, were used extensively in Kuwait for local transportation and base life support and many base operating tasks in the deployed unit staging and training camps of Kuwait. Army Materiel Command used contractors in support of technical systems, but they were not used extensively with the combat forces for the initial assault, as they did not provide a pure combat function required in the attack. The Kuwait government met 130 separate support requests from the ARCENT staff, considerably reducing the requirement for soldiers in this initial phase of the conflict.[105]

6) Summary

The "running start" of combat operations even as military forces continued to flow into the theater left the Theater Sustainment Command and the Corps Support Commands short of trucks to push materiel forward to the combat forces as they moved into Iraq. The Combat Studies Institute at Fort Leavenworth, Kansas, conducted a review of OIF Logistics which found that in regard to the initial

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[103] Gregory Fontenot, *On Point, The United States Army in Operation Iraqi Freedom, Through 01 May 2003* (Fort Leavenworth KS: Combat Studies Institute Press, 2004), xxv.

[104] Ibid., 7.

[105] Ibid., 32.

assault into Iraq that the "Decade-long effort to digitize logistics, adapt business practices and promote efficiency over effectiveness is insufficient for the contemporary operating environment."[106] This is in regard to major combat operations when bringing soldiers into a theater and when trying to sustain a large combat force on the offensive, such as the 3rd Infantry Division and the 1st Marine Expeditionary Force assault into Iraq. These units were critically short of sustainment as the support structure was unable to reach them as they moved into Iraq so quickly.

The lessons that should be drawn from this action are that, in regard to supporting a large-scale ground assault, the solution is not to abandon distribution-based logistics but to rebalance these initiatives and have units retain more unit-controlled stock. In addition, it is important to keep a minimum safe level of materiel available to move with and right behind combat forces with the Army's combat logisticians and the brigade and echelon above brigade when executing offensive actions. The echelon brigade support forces need to be in place prior to the next operation of this magnitude and should not be shortchanged on their required lift assets (trucks) needed to sustain the force. Otherwise, in the next offensive battle, shortages may exist and the offensive runs the risk of being stopped in place to await sustainment support (be it petroleum, ammunition, repair parts, etc).[107]

Section Two: Operation Iraqi Freedom/Operation New Dawn Stability Operations

1) Background

Operation Iraqi Freedom/Operation New Dawn stability operations took place from June 2003 to the end of the declared military mission in December 2011.[108] This period was followed by an ongoing

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[106] U.S. Army Operation Iraqi Freedom Study Group, "U.S. Army Operation Iraqi Freedom Observations Quick Look," (Leavenworth, KS: Center for Army Lessons Learned, August 2003), 16

[107] United States General Accounting Office Study: "Defense Logistics: Preliminary Observations on the Effectiveness of Logistics Activities during Operation Iraqi" (Washington, DC, December 18, 2003), 3.

[108] "The transition to Operation New Dawn, Sept. 1, marks the official end to Operation Iraqi Freedom and combat operations by United States forces in Iraq. Service members serving in Iraq will conduct stability operations, focusing on advising, assisting and training Iraqi Security Forces (ISF). Operation New Dawn also represents a shift

training mission that continues today in Iraq with the Department of Defense in support of the U.S. State Department's efforts at building a stable government in Iraq. The pace of combat operations ebbed and flowed over these seven years in response to the changing situation in Iraq related to insurgent activity and the U.S. action. This period remained a limited war for the U.S. with gradually less national will to continue military support of the new Iraqi government.

2) Logistics structure

The Logistics structure remained relatively stable in that it provided the same or slightly increased levels of capability during these seven years. Changes were made as more contracted capabilities became available, specifically LOGCAP. As of May 2005, approximately 46,000 logistics soldiers were serving in Iraq. LOGCAP had an additional 38,000 contractors serving in Iraq or in Kuwait and Turkey likely to deploy to Iraq during the course of their duties. Twelve thousand of these LOGCAP contractors were U.S. expatriate personnel.[109] The Army's transformation to the modular force changed the logistics command and control organizations from the brigade combat team to the Corps Support Command (COSCOM).

Logistics transformation became just a part of normal business in theater as the Army continued to transform from the Army of Excellence to the Modular Army, even as it was conducting operations in Iraq and Afghanistan. The Theater Sustainment Command in Kuwait transformed from the 377th TSC (multi-component) to the 1st Theater Sustainment Command. The 1st TSC became a Third Army subordinate unit stationed at Fort Bragg, North Carolina, but had an enduring presence in Kuwait and was responsible for the Army's sustainment support in all of the CENTCOM area of responsibility. The Corps

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from a predominantly military U.S. presence to one that is predominantly civilian, as the Departments of Defense and State work together with governmental and non-governmental agencies to help build Iraq's civil capacity." Operation New Dawn, STAND-TO! September 1, 2010, http://www.army.mil/standto/archive/2010/09/01/ (accessed April 13, 2012).

[109] Congressional Budget Office, "Logistics Support for Deployed Military Forces," Study, October 2005, 4, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/67xx/doc6794/10-20-militarylogisticssupport.pdf (accessed March 25, 2012).

Support Command that served as the Corps senior operational logistician, overseeing and executing logistics for the Corps (serving for many of the years under the title of the Multi-National Corps-Iraq) transformed to an Expeditionary Sustainment Command (ESC).[110] The ESC became a separate unit from the Corps and, by the new transformation doctrine, was no longer tied to the Corps it habitually supported. As an example, the 13 COSCOM, home stationed at Fort Hood and serving as a subordinate unit of III Corps, was no longer tied to deploying in support of only III Corps. The materiel management functions that the ESC performed were pushed forward to the next subordinate level, the Corps Support Groups. The Corps Support Groups and the Division Support Command merged many of their staff capabilities and transformed to the Headquarters of Sustainment Brigades. The Corps Support Battalions gained a larger staff and became Combat Sustainment Support Battalions. The Division Support Command's Main Support battalion was inactivated and many of its capabilities were pushed to the Forward Support Battalions, which almost doubled in size and became Brigade Support Battalions assigned to individual Brigade Combat Teams. Ultimately, more materiel management capability was placed in the sustainment headquarters organizations that evolved at the Sustainment Brigade level and below. The ESC is approximately half the size of the legacy COSCOM, but the functions it has lost have been pushed forward closer to the brigade combat teams and the fight.[111]

3) Logistics flow

The various initial logistics issues and challenges that plagued the invasion of Iraq were quickly corrected during the years of OIF stability operations. For example, the Corps Support Commands and Quartermaster Supply Companies deployed to Iraq in support of Operation Iraqi Freedom II (the rotation to replace the initial invasion forces) with all lines and items on the Authorized Stockage List (ASL) in

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[110] Expeditionary Sustainment Command (ESC) is what the Corps Support Commands (COSCOM) transformed into under the Modular Army concept.

[111] Force Development Branch, Combined Arms Sustainment Command, "CSS Transformation", (Briefing, Fort Lee, VA, 2009), 29.

their assigned Supply Support Activity (warehouses).[112] The building of these on-hand supply stocks of class II, IIIp, and IX was demand driven and configured to support a customer base that did not deploy to the same sector of Iraq and was not supported.[113] The result was that Supply Support Activities had supplies in theater but did not necessarily have supplies readily available for issue.[114] By the end of 2005, technical details (parameters in the automated sustainment support systems) were changed to allow units to pass requests (requisitions) for parts to other supporting Supply Support Activities (referral process). Quartermaster Supply Companies were prevented from deploying with their organic supply support activities tailored to support home station customer units.[115] Significant efficiencies were implemented during these years, such as the consolidation and closure of supply points, supply support activities, and ammunition storage points. All of these efficiencies were very possible to execute with the secure lines of control and bases that allowed a hub-and-spoke distribution method to be implemented.[116]

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[112] Authorized Stockage List (ASL): Supplies maintained in a warehouse to meet future demands. Source: JP 4-09. For further information see: Army Regulation (AR) 710-2 "Supply Policy Below the National Level", (Department of the Army, 28 March 2008), p. 3-1. (http://www.apd.army.mil/jw2/xmldemo/r710_2 (accessed March 26, 2012).

[113] Classes of supply: The ten categories into which supplies are grouped in order to facilitate supply management and planning. I. Rations and gratuitous issue of health, morale, and welfare items. II. Clothing, individual equipment, tentage, tool sets, and administrative and housekeeping supplies and equipment. III. Petroleum, oils, and lubricants. IV. Construction materials. V. Ammunition. VI. Personal demand items. VII. Major end items, including tanks, helicopters, and radios. VIII. Medical. IX. Repair parts and components for equipment maintenance. X. Nonstandard items to support nonmilitary programs such as agriculture and economic development. Source: JP 4-09.

[114] The Supply Support Activity (SSA), that deployed as part of the Logistics Task force built around the 264th Corps Support Battalion, was tailored to support the XVIII Airborne Corps echelon above division units. It supported a different set of units in Baghdad, Iraq, and did not meet the new customer demand satisfaction. This was the case specifically for class IX items as the ASL was not tailored to support the new density of supported units combat vehicles and equipment. Author's personal experience as the Support Operations Officer and the Battalion Executive Officer of the 264th Corps Support Battalion (Airborne) from 2004–2005 at Fort Bragg, NC and in Baghdad, Iraq.

[115] Author's personal experience as the Support Operations Officer and the battalion Executive Officer of the 264th Corps Support Battalion (Airborne) from 2004–2005 at Fort Bragg, NC and in Baghdad, Iraq.

[116] Author's personal observation and experience in Iraq various times between 2004 and 2010.

4) Use of reserves

The Army continued its reliance on the Reserve Component forces during the years of OIF. The Army Force Generation Model (ARFORGEN) placed the Regular Army units on one-year deployed and one-year at home station cycles.[117] The Reserve Component deployed many of its units on a one-to-four year cycle. The Regular Army, especially the logisticians, could not have sustained the pace of deployments without the Reserve Component. As intended with the Total Force Concept, the Regular Army provided an initial expertise and capability. By 2004, however, seventy percent of all logistical units in the CENTCOM area of responsibility were Reserve Component Units.[118]

An example of the integration of the Total Army Concept in Iraq is as follows: The Combat Sustainment Support Battalion (CSSB), supporting over 120,000 military and civilian personnel in the U.S. Division-Center in Baghdad as part of U.S. Forces Iraq, during the time period from 2009 to 2010, controlled seven maintenance, supply, and transportation company-sized units. These units were from the Regular Army (home stationed in the United States Army Europe and the continental U.S.), the Army National Guard, and the Army Reserve. Due to boundary changes and the reduction of Forces in Iraq, the CSSB worked for three different Sustainment Brigade headquarters (two Regular Army and one Army Reserve), working for each headquarters for only three to four months at a time. All of these units were on a different deployment and rotation schedule depending on when they arrived in theater, the component from which they were derived, and the length of time the Reserve Component units had expended in the mobilization process.

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[117] This was the case in general. Some low density and high demand units were required to deploy on a shorter reset cycle at their home station. Several units also became part of a surge force and had unit deployments extended up to fifteen months.

[118] Congressional Budget office, "Logistics Support for Deployed Military Forces," Study, October 2005, 4, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/67xx/doc6794/10-20-militarylogisticssupport.pdf (accessed March 25, 2012).

5) Use of contractors

The Combat Sustainment Support Battalion supporting over 120,000 military and civilian personnel in the U.S. Division-Center in Baghdad as part of U.S. Forces Iraq, during the time period from 2009 to 2010, had contract management supervision or provided Contracting Officer Representative (COR) oversight of nineteen direct contracts, performed by over 700 contractors.[119] These contractors were both U.S. citizens and/or third country nationals (generally skilled and semi-skilled workers from Pakistan and India) and locally hired Iraqi nationals. Contracting Officer Representative duties were often assigned to very good soldiers, selected by their chain of command, that had a related military-occupational skill; however, frequently these soldiers were not at the optimal experience level to be as effective as they could, be or in some cases should be, in such a position. [120] It was a challenge with mixed results to find available and experienced military personnel that were actually familiar with the task or tasks for which they provided oversight.[121] One example of the challenges that were encountered was that of soldiers trained as Army skill 92W (Water Purification Specialist) to operate Army Reverse Osmosis Water Purification Systems (ROWPU). These soldiers provided military oversight of a civilian water bottling plant (manufactured in Italy) that purified and bottled thousands of gallons of water daily, being responsible for a project (or contractor) providing a service they may not have been best prepared to accomplish. [122]

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[119] This observation is based on personal reflections of the author while serving within the Iraqi Theater Of Operations as a Battalion Executive Officer in 2004 to 2005 of a Logistics Task Force (Corps Support Battalion) located in Baghdad, supporting the Multi-National Division-Baghdad; and further observations and reflections of the author while serving at the same location in 2009 to 2010 as a Combat Sustainment Support Battalion Commander supporting the Multi-National Division-Baghdad later renamed the United States Division-Center, United States Forces Iraq. During this time period, the battalion executed normal sustainment operations, transportation support, and processing of excess materiel in support of the Responsible Drawdown of Forces (RDOF) from Iraq.

[120] COR: contracting officer representative: *Joint Publication* 4-10, 1-02.

[121] This observation is based on personal reflections of the author while serving within the Iraqi Theater Of Operations as the United States Division-North, Assistant Chief of Staff G4 during 2010 execution of US forces initiated Responsible Drawdown of Forces (RDOF) to 50,000 US uniformed service personnel.

[122] This observation is based on personal reflections of the author while serving within the Iraqi Theater Of Operations in 2009 to 2010 as a Combat Sustainment Support Battalion Commander (Logistics Task Force) supporting the Multi-National Division-Baghdad, later renamed the United States Division-Center, United States

Contractors provide a huge capability to the U.S. Army and the logisticians that employ their capabilities. During the summer of 2010, in the United States Division-North area of responsibility in Northern Iraq, almost 50,000 contractors were counted during the contractor census as part of the Reduction of Forces (RDOF). These contractors were both LOGCAP and the many direct contract service providers living on the U.S. Army bases.[123] Five thousand personnel worked on the LOGCAP contract supporting the United States Division-North with base operating support, requiring more than a sustainment brigade of soldiers to replace that capability.[124]

6) Summary

This seven-year time period in support of Operation Iraqi Freedom/Operation New Dawn was a period of significant change in the Army force structure as the transformation to the modular Army took place in stride.[125] Logisticians became very familiar with the total force of Regular Army, Army Reserve, and Army National Guard working together in the same support battalions. Continued reliance on contractors, be they direct contracts or LOGCAP, over these years created trust and added management efficiencies between each. The use of the hub-and-spoke distribution method proved itself during this period, allowing efficiencies to be gained in in-transit visibility. Distribution-based logistics refined as forces drew down out of Iraq and warehouses and supply activities were consolidated.

Forces Iraq. The battalion executed during this time period normal sustainment operations and executed transportation support and processing of excess materiel in support of the Responsible Drawdown of Forces (RDOF) from Iraq.

[123] Local contractors who provided services to the military but did not live on the bases were not counted. Total Contractors supporting USD-N were estimated to be a one to one ratio with soldiers. Census taken in summer of 2010 found approximately 20,000 contractors in the area. At the same time, 23,000 soldiers were in USD-N.

[124] This observation is based on personal reflections of the author while serving within the Iraqi Theater Of Operations as the United States Division-North, Assistant Chief of Staff G4 during 2010 execution of US forces initiated Responsible Drawdown of Forces (RDOF) to 50,000 US uniformed service personnel.

[125] Refer to Footnote 109, page 43.

Analysis

Historically, nations have had little success in predicting the wars that they will become involved in next; and, no one really knows at the present time what future conflicts will look like.[126] However, the U.S. Army has had some limited success in the past anticipating the conflicts it would become engaged in and preparing for them. Certainly, the assault into Iraq in both Operations Desert Storm and Iraqi Freedom proved the combat formations were trained and equipped for that type of full spectrum conflict to be successful. But the military and the national leadership did not anticipate the seven years of stability operations in Iraq. Thus, the U.S. Army was successful but strained to provide the size of force required to sustain a rotational force for seven years in Iraq, even as the conflict in Afghanistan continued, as well as other commitments throughout the rest of the world that required U.S. military presence.[127]

Based on the fiscal situation the U.S. is currently experiencing and the lack of expressed political will to continue to invest so heavily in nation building, it seems likely that the U.S. will engage in more counter terrorism operations in the near future as opposed to the last five to ten years of counter insurgency. President Obama's statement in January of 2012 regarding a strategic shift to the Pacific and what appears to be a shift to counter terror operations as opposed to counter insurgency are factors that lend credence to this deduction.[128] However, the U.S. military cannot make certain assumptions about precisely what types of wars it will be compelled to fight. With the knowledge available, the challenge is to develop a logistics structure that is carefully balanced to ensure a strong, fully-prepared military for

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[126] Thomas Donnelly and Fredrick Kagan, *Ground Truth: the Future of U.S. Land Power* (Washington, DC: American Enterprise Institute Press, 2008), 36.

[127] Ibid., 38.

[128] U.S. Department of Defense, *Sustaining U.S. Global Leadership: Priorities for the 21st Century* (Washington, DC, January 2012), i. http://www.defense.gov/news/Defense Strategic_Guidance.pdf (accessed January 15, 2012).

any foreseeable contingencies, while recognizing both the fiscal and political constraints of the present environment.[129]

The U.S. Government has been operating with a federal budget deficit that began in 2001 and which, for various reasons, continues to grow into 2012. The Bush tax cuts of 2001 and the fact that the government received reduced tax revenues because of less reported taxable income have been cited as the major reasons for the reduction of federal tax revenues in 2001.[130] In addition, the U.S. response to the terrorist attacks of September 11, 2001, the resulting Global War on Terror, and the U.S. invasion of Iraq added to the financial burden. Also, the military actions in Afghanistan and Iraq, which the U.S. has not attempted to fund "pay as you go," were being fought. Funding all these costly endeavors has resulted in the federal government running a budget deficit; operational costs have not been recouped via taxes on U.S. citizens, nor paid for by other nations.

The continuing constraints on the federal budget will have a considerable impact on all actions and related expenditures of the U.S. government. The Budget proposed by the Department of Defense in January of 2012, for the 2013 fiscal year, reduces the active duty end-strength from 570,000 soldiers to 490,000 soldiers over a period of the next five years.[131] This reduction will place the Army back to a slightly larger size than it was at the beginning of the Global War on Terrorism. To meet the reduced funding goal and still provide for the nation's defense as the ground component, the Army will have to reduce force structure. As such, the Army plans to eliminate eight brigade combat teams (BCT) and the

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[129] Ibid., 37: "The United States simply cannot afford to build a military on the assumption that it will not have to fight particular kinds of wars. Neither can the United States be perfectly prepared to fight every kind of war with no notice, of course.

[130] 107th Congress, United States of America: Public Law 107–16, Economic Growth and Tax Relief Reconciliation Act of 2001 (Washington, DC, June 2001), (http://www.irs.gov/pub/irs-utl/egtrra_law.pdf (accessed February 29, 2012).

[131] Leon E. Panetta, *Statement on Fiscal 2013 Budget* (Pentagon, January 26, 2012), 1:"In fiscal 2013, we will ask for an additional $88.4 billion for overseas contingency operations to maintain support for our troops in combat. That compares to a base budget of $531 billion and $115 billion for overseas contingency operations for fiscal 2012."

corresponding enabler units that support them. In addition, starting in 2012, the Army will reposition the two heavy brigades out of Europe, leaving only a Stryker brigade and an airborne infantry brigade.[132]

If further pressure is placed on the federal budget and correspondingly on the Department of Defense appropriations, it is possible that the Army will be required to reduce force structure below the 490,000 soldiers on active duty, as outlined by the Secretary of Defense Leon Panetta. With the political advocacy of the states and the strong National Guard lobby, it is possible that more of the Army's active duty logistics structure will be further reduced and/or placed into the Reserve Components. Quite possibly, some of the Army's active duty logistics structure may be assigned to the Army National Guard.

Although the active duty logistics structure at the echelon above brigade has been significantly reduced since the Vietnam era, it is possible that this trend will continue as a means to save remaining funding for active duty combat forces. A reasonable argument could be made for placing more logistics structure into the Reserve Component. The United States Army Reserve has neither strong advocacy support from the states, nor support from strong professional associations, organized at the state level, as does the Army National Guard. The states have a compelling interest in having more logistical units assigned in their state and under their state control.[133] The associated special skills and equipment of additional units (trucks, bulldozers, etc.) would enhance the states response capabilities to respond to emergencies or natural disasters in the states without relying on federal action.

The Chief of the National Guard Bureau, who since December 2011 is now a member of the Joint Chiefs of Staff, has increased influence and access to decision makers.[134] Both the Department of Defense

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[132] U.S. Congress, *U.S. National Defense Authorization Act for Fiscal Year 2012* (Washington, DC, December 31, 2011) http://www.govtrack.us/congress/bills/112/hr1540 (accessed January 7, 2012).

[133] Kristina A. Emmons, "Specialized Regional National Guard Brigades: The Army's Federal Disaster Response Force" (Monograph, United States Army Command and General Staff College, Fort Leavenworth, Kansas, April 24, 2003), 36: The Army General Officer offsite agreement that took place in 1994 established the types of forces that were to go into the Reserve Components. The Army Reserve was to be primarily combat service and combat service support and the Army National Guard was to be primarily made up of combat organizations.

[134] U.S. Congress, *U.S. National Defense Authorization Act for Fiscal Year 2012*, Sec. 511 Subtitle B: Reserve Component Management (Washington, DC, December 31, 2011), http://www.govtrack.us/congress/bills/112/hr1540 (accessed January 7, 2012).

Secretary and the Chairman of the Joint Chiefs, General Martin Dempsey, have pointed out the need for reliance upon the Reserve Component. General Dempsey stated that a strong ready-for-action Reserve Component is a vital element of the military structure.

A smaller active force requires a capable and ready Reserve Component. Among other applications, a strong Reserve Component is a vital element of the concept of reversibility embedded in the strategic guidance. Consequently, we are making only marginal reductions in the Army reserve and Army National Guard and no reductions to the Marine Corps Reserve. Furthermore, we will leverage the operational experience and institute a progressive readiness model in the National Guard and Reserves in order to sustain increased readiness prior to mobilization. In particular, we will maintain key combat support capabilities such as sustainment as well as combat service support capabilities such as civil affairs maintained at a high readiness level in the Reserve Component[135].

Several lessons were learned in Iraq. One is that even though the U.S. can dominate during the high end of full spectrum operations, it takes a large force, sustained over many years, to conduct stability operations. The U.S. needs a balanced approach to ensure that forces are trained, equipped, and available to conduct both full spectrum and stability operations. Unfortunately, it is unlikely that current and midterm budgets will support the force size required to do both missions well. To remedy or work within the constraint of less than the ideal, the military, and the U.S. Army specifically, will have to develop forces that can do both operations adequately. Also, space on the ground and training time must be created for the follow-on forces. The alternative is to accept that there are types of conflict that the U.S. is not going to enter, unless compelled to do so, with the nation as a whole behind the effort, resulting in national mobilization. The U.S. has not entered such a conflict since World War II.

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[135] Martin E. Dempsey, Chairman of the Joint Chiefs of Staff, "Budget Decisions Press Statement," January 26, 2012. http://www.brac.maryland.gov/documents/CJCS%20Budget%20Press%20Statement_26%20Jan%2012_2pages.pdf (accessed January 27, 2012).

The best logistics structure to support the U.S. Army's role in conflicts of the near future is very similar to that currently in place. However, leaders must be aware of the historical challenges of the past, especially of posturing the combat force with enough materiel readily available during the early phases of conflict. Certainly, World War II, Vietnam, and the operations in Iraq have proven that combat forces will arrive in theater at a rate that is faster than had been anticipated. Correspondingly, history has also shown that logistic support does not enter a theater as quickly as the combat forces. Thus, logisticians have had to surge to meet requirements through improvisation and innovation when realties on the ground proved different from events planned.

The optimal solution for the U.S. Army is to operate in a resource rich, unconstrained environment. The best-case scenario would be an all Regular Army support structure at the echelon above the brigade combat team. However, such a structure is unrealistic today or in the near future because of the nation's current fiscal and resource-constrained environment. Therefore , the best feasible logistics structure is one that relies upon the Total Force Concept integrating the Regular Army, the Reserve Component, and contracted capabilities of various scope and size. As was learned from OIF, with the implementation of Focused Logistics, fiscal savings can be accomplished through continued refinement of responsive logistics efficiencies and with the oversight of Department of Defense, end-to-end distribution.

Conclusion

The U.S. may be at a turning point in how it employs national policy through the organization and use of the military. Several initiatives have been directed by U.S. national leaders and by the senior military leaders which are changing the way the military operates. In addition, the country is now experiencing fiscal constraints and with them the corresponding impact on the Department of Defense's ability to maintain the large force levels that were necessary in response to the requirements of Operation Iraqi Freedom and Operation Enduring Freedom.

The elevation of the Chief of the National Guard Bureau to a position on the Joint Staff implies that the National Guard now may have additional access to the senior civilian leaders it would not have had prior to December 2011. This direct access to civilian leaders, separate from the Service Secretaries of the Army or Air Force, may foster a further development of trust. Increased access and corresponding trust in the use of the Reserve Component as an operational reserve, as opposed to the position the Reserve Component has had previously as a strategic reserve, may result in a stronger, unified Army.

Historically, the Army National Guard has been weighted heavily with combat units and the Army Reserve has had the preponderance of the combat service and combat service support units. Due to the relevancy and unique capability of the Army combat service and combat service support units via the aircraft, heavy construction equipment, the trucks, the water purification capability, and the other special equipment assigned, it is possible in the near future that the individual states will work to rebalance the mixture of units between the Army National Guard and the Army Reserve. The states benefit in that they then have more equipment available to support their disaster response requirements. [136] The access that the Chief of the National Guard Bureau now has makes it even more likely that this message will gain acceptance in Washington, D.C. with the national leadership. The Defense Authorization Bill of December 31, 2011, gives the Secretary of Defense new call-up (mobilization) authority of up to 60,000 Reserve Component soldiers for a year.[137] Previously, this authority was authorized and only maintained at the presidential level.

Again, from a historical perspective, the Army has continually been able to move its self-contained basic building block formation to a smaller and more adaptable-sized formation. The Army moved from a Field Army based structure in 1940 through the division-based structure of the Cold War Era's Army of Excellence to the brigade-based modular Army of 2012. Improvements in the technology

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[136] House of Representatives. *United States Code, Title 32 – National Guard* (Washington, DC, January 3, 2012) http://uscode.house.gov/download/title_32.shtml (accessed January 13, 2012).

[137] U.S. Congress, *U.S. National Defense Authorization Act for Fiscal Year 2012* (Washington, DC, December 31, 2011) http://www.govtrack.us/congress/bills/112/hr1540 (accessed January 7, 2012).

and processes have allowed the Army to sustain these continually smaller, more autonomous formations. The continuing implementation of evolving thought and technology has provided new capabilities through the Focused Logistics Concept. Focused Logistics has allowed the war-fighting combat units and its soldiers to do more in a theater of operation, without weeks and months of logistics preparation of the battlefield.

Contractors have always been called upon when needed and are here to stay. Contracted logistics capability has proven itself in both Operations Iraqi Freedom/New Dawn and Operation Enduring Freedom by providing unique capabilities that enhance the Regular Army sustainment structure.

It appears that the Obama administration has a firm idea on the role it wants the military to play in the future. If President Obama wins a second term in November 2012, another four years of his administration may mean that the U.S. stays out of stability operations. The end of Operations Iraqi Freedom/New Dawn and the projected withdrawal of the U.S. from Afghanistan in 2014 will enable the country to recoup a peace dividend. This peace dividend may allow the U.S. to spend fewer dollars on fighting and the building of other foreign nation's local infrastructure and capacity. The peace dividend should reduce the number of soldiers required in these combat and stability operations. The Obama administration has signaled a move away from counter insurgency operations to operations supporting counter terrorism.[138] If the future holds as per what the current administration wishes it to be, then a continued reliance on the Reserve Component for a substantial part of the Army's logistics structure is tenable. The Reserve Component has proven itself a viable and important part of the Total Force Concept and thus vital to the conduct of U.S. national security, including combat and stability operations since 2001. [139] Its importance will continue in the near to mid-term future.

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[138] U.S. Department of Defense, Sustaining U.S. Global Leadership: Priorities For the 21st Century (Washington, DC, January 2012), 4.

[139] Martin E. Dempsey, Chairman of the Joint Chiefs of Staff, "Budget Decisions Press Statement," January 26, 2012. http://www.brac.maryland.gov/documents/CJCS%20Budget%20Press%20Statement_26%20Jan%2012_2pages.pdf (accessed 27 January, 2012).

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